Reducing Health Insurance Enrollment Barriers for Individuals Who are Homeless

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Abstract

Health insurance enrollment continues to be a problem for homeless adults in North Carolina (NC) compared to adults with stable housing. Factors acting as barriers to health insurance enrollment were identified as internal and external, which this Doctor of Nursing Practice (DNP) project focused on addressing by using a health insurance enrollment flowsheet. The project and flowsheet were implemented in Families Moving Forward, an emergency transitional homeless shelter in Durham, NC. Demographic and project-specific data was collected using a qualitative survey. Process data showed notable trends regarding administrative preparedness, knowledge of Medicaid criteria, and self-sufficiency. The implications of these findings are discussed along with the potential replicability of the health insurance enrollment flowsheet in other agencies.

Keywords: homeless, home insecure, barriers, uninsured adults, insurance enrollment, health service utilization, process improvement

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Section I. Introduction

Background

Attaining health insurance like Medicaid has been shown to provide more consistent access to a healthcare provider, which allows for the proper management of existing health conditions (Han et al., 2015; Winkelman et al., 2019). Homeless individuals have higher mortality rates and higher comorbid conditions than those with stable housing (O'Carroll & Wainwright, 2019; Wadhera et al., 2019). Unfortunately, the combination of homelessness and medical comorbidities further heightens the mortality rate due to various factors like undiagnosed health problems, lack of health management, and lack of healthcare access (Feodor Nilsson et al., 2018).

A process improvement project to decrease barriers in the health insurance enrollment process in a local emergency shelter is a positive step towards addressing the disproportionate homeless mortality rates. Families Moving Forward (FMF) is a community-based organization in Durham, NC, that serves as an emergency shelter for families. FMF partners with various local and national organizations to fulfill their mission of assisting homeless families into stable housing, achieving self-sufficiency, and realizing the organization's vision of keeping families safe (FMF, n.d.-d). This Doctor of Nursing Practice (DNP) project focuses on decreasing the barriers to the health insurance enrollment process for uninsured FMF adults with housing insecurity.

Organizational Needs Statement

Access to healthcare has been identified as important by FMF and its families (T. Melvin, personal communication, February 13, 2020). FMF anecdotes described families deferring health insurance because of the stresses of poverty and home insecurity (M. Vinson, personal

communication, March 17, 2020). Individuals suffering from homelessness have complex health needs, exacerbated by healthcare avoidance (Klop et al., 2018). This health behavior contributes to the disparity of lower health insurance coverage in individuals with housing insecurity than those with stable housing (North Carolina Institute of Medicine [NCIOM], 2020). FMF has had 18.75% of individuals they had served in 2019, and 18.39% of guests during the first quarter of 2020 that did not have health insurance (A. Tropiano, personal communication, April 24, 2020). These rates oppose the Healthy NC 2030 health indicator of decreasing NC's uninsured population. Reducing health insurance process barriers will help close the gap between the current NC uninsured rate of 13% and the Healthy NC 2030 goal rate of 8% (NCIOM, 2020). Decreasing barriers to health insurance enrollment help FMF families develop more robust healthcare self-sufficiency that the organization hopes each of their families achieves.

Improving the accessibility of the health insurance enrollment process for individuals that are homeless is congruent with the goals of Healthy NC 2030 and addresses the Triple Aim. Access to healthcare and decreasing healthcare costs are directly affected by this project (Berwick et al., 2008). Increased Medicaid or subsidized insurance enrollment reduces both uncompensated care in health systems and individual out-of-pocket costs (Dranove et al., 2016; Winkelman et al., 2019). Having healthcare insurance helps decrease barriers to access a primary healthcare provider who can manage medical and psychiatric conditions in an outpatient setting, rather than the emergency department or inpatient settings, promoting cost savings (O'Carroll & Wainwright, 2019). Increased accessibility to primary care providers will also positively affect the healthcare experience of FMF families by providing the means to help improve their health.

Problem Statement

Healthcare avoidance is costly and risks the deterioration of unmanaged chronic medical problems (Mariano & Harmon, 2019). About one in five adults within FMF have no health insurance, limiting the resources available to address their complex care needs (A. Tropiano, personal communication, April 24, 2020). Reasons for insurance enrollment avoidance are varied, including prioritizing immediate life necessities, knowledge gaps, and reluctance due to mistrust of the healthcare system. Additionally, the complicated enrollment process, restrictive eligibility requirements, unclear document requirements, and a mix of internal and external barriers, like lack of literacy and administrative deterrents, all contribute as restrictions from pursuing the process of healthcare insurance (Hudson et al., 2016; O'Carroll & Wainwright, 2019).

Purpose Statement

The purpose of this project is to decrease the barriers between the uninsured adult in FMF and the process of enrolling in a health insurance plan.

Section II. Evidence

Literature Review

The search strategy focused on addressing the barriers between the desire to apply for health insurance and completing the application process just before paying for coverage. The focus on this stage of the enrollment process was the foundation for the search terms used within the databases. PubMed, the Cumulative Index of Nursing and Allied Health Literature (CINAHL), and East Carolina University's (ECU) One Search were the databases used to explore current strategies to decrease barriers for people that are homeless in completing the insurance enrollment process (ECU, 2019). The search filters used in each database were articles written in English; published between January 1, 2015, until April 30, 2020; peer-reviewed; and human subjects.

The PubMed database was searched using a mixture of Medical Subject Headings (MeSH) terms and keywords. The MeSH term homeless persons, and the keyword homeless, captured the population of people experiencing homelessness. Access to healthcare was captured by the MeSH terms health services accessibility and primary health care and the keywords barriers to healthcare. The status of having health insurance, and the act of enrolling for insurance, were defined by the MeSH terms health insurance and Medicaid, along with the keywords of health insurance, insurance, and insurance enrollment.

A similar approach was taken using the CINAHL database. The population was narrowed to people who are homeless by using the CINAHL subject headings homelessness and homeless persons. The topics of healthcare accessibility and its potential barriers were captured by the CINAHL subject headings health services accessibility and healthcare disparities. The process of enrolling in insurance or the status of having insurance was described by the CINAHL subject

headings Medicaid; insurance, health; insurance, health, reimbursement; health insurance exchanges; and United States Centers for Medicare and Medicaid Services.

ECU's One Search is a compilation of databases that can be accessed online (ECU, 2019). The terms housing insecurity and homeless were used to capture the population of people experiencing homelessness within the literature. The concepts of healthcare, insurance accessibility, and their barriers led to the use of the terms access to care, health service utilization, self-efficacy, barriers, desire, and seeking. Each of the terms associated with a concept was grouped using the Boolean operator *OR*. This grouping was combined with another concept group by using the Boolean operator *AND* before initiating the literature search. This strategy was done for each database search by using various combinations of the search terms seen in Appendix A.

After reading the abstracts, the journal articles were further filtered by applying these inclusion criteria:

- done in the United States
- reflect a population of homeless individuals within the study
- focused in an urban area to reflect one of FMF's geographical characteristics
- describe either Medicaid or subsidized health insurance within the study
- have a study population between the ages of 19 years old to 64 years old
- focus on the outpatient setting
- evidence level six and above

Additionally, the screening process also applied these exclusion criteria:

- focused on a rural population
- focused on a population with stable housing

- focused on a homeless population with a disease or condition as the basis of the study
- the population is within a hospital setting
- study populations focused on ages less than 19 years old or older than 64 years old
- veteran population
- Medicare population
- the study population is outside the United States

This initial search strategy produced a total of 69 articles. After applying the inclusion and exclusion criteria, removing the duplicate articles, and reading through the initially filtered articles, the literature search ultimately generated 16 articles in Appendix B.

The chosen evidence level of six accounts for the lack of rigorous and high-level studies in the literature regarding insurance enrollment barriers for homeless people. The logistical and potential ethical issues with implementing a randomized control trial with a homeless population hinder clinical research (Ojo-Fati et al., 2017). Thus, the lack of articles with a higher level of evidence is unsurprising and requires articles with lower evidence levels.

One of the articles found is based outside of the United States, which meets the exclusion criteria. An exception is made since this article includes a model explaining the health service utilization (HSU) of homeless individuals (O'Carroll & Wainwright, 2019). The data analysis reflects a similar HSU with people that are homeless internationally, which accounts for the generalizability of the model. Nevertheless, generalizability may still be limited since the findings are based on a homeless population located in Dublin, Ireland (O'Carroll & Wainwright, 2019).

Current State of Knowledge

The literature search did not produce articles with high levels of evidence regarding insurance enrollment for people that are homeless. However, there were ample retrospective cohort studies and qualitative studies. Much of the literature search describes the HSU of homeless people, the barriers to primary care accessibility, and the myriad of health issues this vulnerable population has. The obstacles towards insurance accessibility for homeless individuals are not common focal points of study but can be gleaned from most studies. The lack of randomized control trials for the barriers to insurance enrollment affecting people that are homeless highlights a significant gap in the literature.

Regardless of the research gap, there are still common themes that can be drawn from the current literature. The common problems faced by people that are homeless are lack of knowledge regarding the health system, competing priorities, lack of social support, and the limitations of health system structures. These problems have also been mentioned as deterrents for health insurance access in homeless individuals, but their effect on insurance enrollment accessibility has not been investigated. Overall, there are plenty of studies describing the healthcare needs of individuals that are homeless. However, there is not enough high-level research or widely accepted evidence-based guidelines to utilize.

Current Approaches to Solving Population Problem(s)

The limited resources of homeless adult individuals and FMF necessitate practical and low-cost interventions for adults with home insecurity in FMF (T. Melvin, personal communication, April 20, 2020). Rigorous case management has shown benefits for this population but will require continued investments on behalf of any organization utilizing this means of improvement (Mariano & Harmon, 2019). A medical home, in which all

administrative, social services, and primary care offices are open all day and night, is also a suggested solution in the literature to mitigate multiple healthcare access levels for homeless individuals (White & Newman, 2015). This central hub would be an ideal scenario but is not realistic due to the large amount of capital investment needed. Targeted education and outreach to homeless individuals not living in a shelter have also been described as an effective intervention in the literature (Bell et al., 2015; Virapongse & Misky, 2018). Regardless of the difference in geographical location between the adults in FMF to the study population of Bell et al. (2015), a targeted educational intervention regarding insurance eligibility and the enrollment process can be an achievable, low-cost intervention.

Evidence to Support the Intervention

A targeted intervention to address the knowledge gaps in the insurance enrollment process towards uninsured adults with home insecurity would fit the needed practical and low-cost requirements of FMF (T. Melvin, personal communication, April 20, 2020). The literature has indicated that lack of knowledge about the insurance process and the complex eligibility requirements make accessing health insurance more difficult (Fryling et al., 2015; White et al., 2016). Logistics and formal paperwork requirements also contribute as deterrents to insurance access (Parker et al., 2018). FMF's family service coordinators (FSC), who directly assist in insurance enrollment, have also had difficulty with the intricate details of eligibility criteria, which can deter efficiently helping families (A. Tropiano, personal communication, April 24, 2020).

Ultimately, the intervention will be a flowchart detailing the requirements of the insurance enrollment process. FMF adults or the FSC can use this flowchart as a low-cost intervention. Since one of FMF's goals is to encourage self-sufficiency within each person they

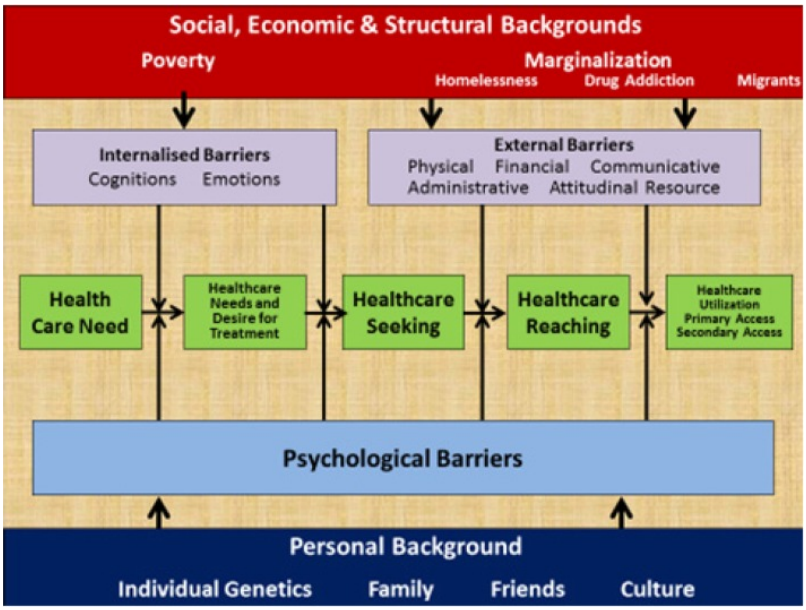
serve, creating a user-friendly guide to navigate the insurance enrollment process corresponds with the development of autonomy (FMF, n.d.-a). Currently, FMF does not have a standardized enrollment process for adults and families that are interested in pursuing health insurance (A. Tropiano, personal communication, April 24, 2020). Therefore, an insurance enrollment flowchart would not only assist families in FMF from being burdened by logistics, but it would also serve as a tool that can help standardize and increase accessibility to a critical process.

Evidence-Based Practice Framework

The HSU model of homeless individuals made by O'Carroll and Wainwright (2019) in Figure 1 is used to depict the different stages in the process of insurance enrollment and the factors that affect each stage. HSU is a multi-stage process that starts with the realization of a health need and ends with the utilization, or receipt, of a health service. The model highlights different factors that commonly affect each stage of HSU by individuals suffering homelessness; these factors do not act as an HSU outcome predictor. Ultimately, the model identifies factors that may be barriers to an HSU stage (O'Carroll & Wainwright, 2019).

Figure 1

The Critical Realist Explanatory Model for Homeless Individuals' HSU



From "Making Sense of Street Chaos: An Ethnographic Exploration of Homeless People's Health Service Utilization," by A. O'Carroll and D. Wainwright, 2019, *International Journal for Equity in Health*, *18*(1), p. 113 (https://doi.org/10.1186/s12939-019-1002-6). CC BY-NC.

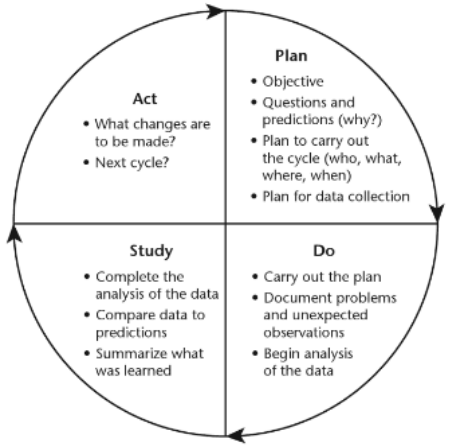
The focus of the intervention is on the barriers that affect the stage of *healthcare-seeking*. Suppose health insurance enrollment is the service received. In that case, the healthcare-seeking stage is when an FMF adult is actively looking through and deciding on one of the insurance options before paying for health coverage. The project's informational flowchart points to factors that may deter an adult that is homeless from seeking insurance (O'Carroll & Wainwright, 2019). These factors are (a) the knowledge and literacy about the health insurance enrollment process, (b) the mixture of internal and psychological barriers that affect engagement in healthcare seeking, and (c) administrative preparedness.

The project execution was based on the Plan-Do-Study-Act (PDSA) rapid cycle tool for change in Figure 2, consisting of four interlinked stages (Langley et al., 2009). The *plan* phase

focuses on the questions that need to be answered and the plan for answering those questions. The *do* phase focuses on data collection, implementing the program, and taking note of anything unplanned. The *study* phase is needed to analyze the data and compare this information with the initial hypothesis. Finally, the *act* phase takes this new analysis to restructure the plan and inform how to implement the intervention (Langley et al., 2009; Leis & Shojania, 2017). Multiple PDSA cycles were done to reassess and improve FMF's process for insurance enrollment (Leis & Shojania, 2017).

Figure 2

The Model for Improvement: Plan-Do-Study-Act (PDSA) Cycle



From "The Improvement Guide: A Practical Approach to Enhancing Organizational Performance," by G. J. Langley, R. D. Moen, K. M. Nolan, T. W. Nolan, C. L. Norman, and L. P. Provost, 2009, Wiley. Copyright 2009 by John Wiley and Sons. Reprinted with permission.

The first PDSA cycle for the intervention focused on understanding the project's problem (Leis & Shojania, 2017). Therefore, the initial phase of the PDSA was understanding the extent of the problem that the uninsured adults in FMF have regarding insurance enrollment (Langley et al., 2009; Leis & Shojania, 2017). A prediction about the problem's state serves as the initial hypothesis to be tested (Institute for Healthcare Improvement [IHI], 2020; Langley et al., 2009).

A survey administered to adult guests that are part of FMF's programs was the source of primary data. The survey has a question regarding the perception of health insurance forms based on a 5-point Likert scale ranging from *never* to *always*. Another question aims to capture a respondent's sense of autonomy in their search for health insurance. This survey also has three items regarding the perceived knowledge of eligibility requirements and the documents required to apply for health insurance. Another question prompts the respondent to review if they have all the documents necessary to attain health insurance and what they plan to do to achieve the missing documents. Once data was gathered from the surveys, they were analyzed to guide the edits of the flowchart's content. An evaluation of the data analysis informed the best next step, and the planning process of the PDSA cycle was restarted at this point.

The site champion and FSCs were directly involved in this iterative process of administering the surveys, providing feedback, and shaping the insurance enrollment process using the flowchart intervention. Additionally, FMF Volunteers assisted in engaging the families' with the DNP project and administering the surveys. The initial rapid cycles of PDSA helped articulate the problem further, and the following cycles refined the intervention (Leis & Shojania, 2017). The goal of each cycle was to identify an aspect of the intervention that can be improved.

Ethical Consideration and Protection of Human Subjects

This DNP project's structure reflects conscious ethical considerations regarding the principles of respect for persons, justice, and beneficence based on the *Belmont Report* (The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). The population targeted by this project were adults experiencing home insecurity within the FMF temporary housing facility, which is a known vulnerable population

(The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). Willing participants had the freedom to withdraw at any time, which maintained their autonomy. The protection of privacy and confidentiality occurred by avoiding the use of any personal identifiers. Originally, a private space within the FMF temporary housing facility was planned to serve as a space for the in-person project implementation. When the Coronavirus pandemic did not allow for in-person survey administration, the online meetings with FMF guests were done through a secure connection, and no personal identifiers were recorded with the surveys completed. Online surveys to be distributed by FMF staff were either completed anonymously by respondents through available computers in FMF or using their own personal electronic device, ensuring privacy and promoting equity for potential participants. Purposefully moving to an online format helped eliminate logistical barriers for participants such as transportation and childcare. Additionally, implementing the project within the FMF building or using their own electronic devices provided participants with ease of accessibility.

The risk of physical or emotional harm was minimal compared to the potential benefit for the project population. The DNP project focused on process improvement, the internal and administrative barriers that deter participation in the healthcare insurance enrollment process, and how these barriers are affected by using an educational flowchart. Thus, there was no physical or psychological risk of harm for participants. The survey questions did not have components that participants may have perceived as emotionally distressing or traumatic. The minimally invasive nature of the project design and the participants' autonomy throughout the study minimized the potential for being exploited or coerced. An educational guide to encourage accessing the healthcare insurance enrollment process can improve FMF adults' health, which outweighed the overall physical and emotional risks for participation.

This DNP project followed the process required by ECU for primary investigators in any scholarship activity. The process consisted of completing the Social and Behavioral Research modules within the Collaborative Institutional Training Initiative (CITI) online training. These modules highlighted essential concepts and regulations recommended by the Department of Health and Human Services for research projects (University and Medical Center Institutional Review Board, 2020). Additionally, FMF does not have any formal process for approving DNP projects and only required a memorandum of understandings (T. Melvin, personal communication, May 21, 2020).

Section III. Project Design

Project Site and Population

Description of the Setting

FMF is an organization located close to downtown Durham, NC. The project implementation occurred in the FMF facility named Neighbors Experiencing Success Together (NEST), which serves as a transitional housing facility that can host up to 21 families at a time (FMF, n.d.-c). FMF is the largest housing provider for homeless individuals in Durham, NC, and serves an estimated 75 to 85 families yearly through the NEST (FMF, n.d.-d).

Description of the Population

The target population consisted of two groups. The first were adult individuals ages 19 to 64 years old that were currently living in the NEST transitional housing facility. The second group was the adults of the same age range within the Aftercare program; these individuals have transitioned into their own home after leaving the NEST facility. Along with the project site champion and VISTA Volunteers, any early adopters of the insurance enrollment flowchart (see Appendix D) may have promoted the flowchart's utility to other residents in the NEST. A potential barrier to this project may have been the lack of a professional relationship with the NEST's current residents, leading to possible mistrust and hesitancy to participate in the project.

Project Team

The formal project team members included the primary investigator, Daniel Vincent Lacambacal; the FMF site champion, who was also the FMF Director of Partnerships and Programs; and the ECU DNP faculty advisor. External team members who contributed insight and expertise towards this project included the FMF FSCs; the Director of Residential and Support Services; VISTA volunteers (AmeriCorps members who serve a 12-month long service

full-time work schedule with FMF); and the Applications Program Manager for Durham County Social Services (FMF, n.d.-b).

Project Goals and Outcome Measures

FMF did not have a formal IRB process or a formal approval requirement for proposed projects to be implemented on-site. The project was formalized by writing a memorandum of understandings between FMF and ECU.

Description of the Methods and Measurement

Prior to this project implementation, there was no standardized process for participating in health insurance enrollment for the individuals living in the NEST. This project aimed to reduce the barriers to participating in the health insurance enrollment process experienced by individuals that were unhoused or homeless by developing a flowchart to guide individuals through the process of obtaining health insurance. FSCs, the individuals working in FMF who act as advocates and case managers for FMF clients, were interviewed to gain insight into the current health insurance enrollment process and inform how to structure the flowchart.

The project did not aim to yield any quantifiable outcome measures. There have not been studies to measure barrier reduction regarding the health insurance enrollment process, a multifactorial concept. Thus, process measures were assessed to illustrate the effects of this project's intervention. One such process measure was the percentage of residents enrolled in health insurance during the implementation time frame. The FMF Director of Residential and Support Services provided this data monthly. Qualitative survey data provided the majority of the DNP project's process measures. The original plan was to administer the survey for a total of four months. A data collection tool consisting of survey questions seen in Appendix C was provided to NEST residents. This survey includes: (a) demographic questions to describe the

participants in the study, (b) project-specific questions to gain insight on their perceived knowledge about the insurance enrollment process and administrative preparedness for enrollment, (c) an open-ended question to elicit other concerns about the enrollment process, and (d) a question to provide feedback on the health insurance flowchart. Results from the open-ended questions regarding Medicaid eligibility and additional concerns with the health insurance enrollment process were coded into themes at the end of the implementation phase; these results helped inform how to revise the flowchart.

The PDSA rapid change cycle was used as the project implementation tool for methodical weekly revisions of the insurance enrollment flowchart for the FMF residents (Langley et al., 2009). The PDSA worksheet was used as the project tracking tool to document project problems, essential observations and evaluate if each PDSA cycle's objective was met (IHI, n.d.). Each PDSA cycle was revised when the cycle's plan stops working or shows signs of stalling rather than progressing, and the PDSA worksheet served as the formal planning guide for the following PDSA cycle.

The insurance enrollment flowchart was developed and revised based on the survey's feedback and the observations documented in the PDSA worksheet. Revisions to the flowchart were done after each cycle.

Discussion of the Data Collection Process

Starting the week of August 10, 2020, a qualitative survey consisting of demographic questions and project-specific questions was made available to all FMF adults. These were distributed by VISTA volunteers assigned to each FMF subpopulation either in-person or digitally via Qualtrics. Data were obtained from project participants using the data collection tool

seen in Appendix C, which is identical to the online survey. Participants were instructed to utilize the health insurance enrollment flowsheet for survey questions 11 to 16 as reference.

The PDSA worksheet was used for each cycle to notate feedback from NEST residents and FMF staff, document observations, and highlight potential problems during implementation as seen in Appendix E. These worksheets were securely kept and used as references for future PDSA cycles. The survey responses were recorded by inputting the data in an SPSS Statistics spreadsheet; open-ended responses were coded into themes.

Implementation Plan

The following steps were taken to implement this DNP project:

1. The project timeline, frequency of data collection, and general workflow was arranged with the site champion.
2. The PDSA worksheet was used as a guide to planning each cycle; it was also used to document observations, applicable conversations, and problems noted during project implementation.
3. The percentage of residents enrolled in health insurance was obtained from the FMF Director of Residential and Support Services at the beginning of each month.
4. In-person survey administration by the VISTA volunteer occurred daily within the NEST. The site champion and another VISTA volunteer reached out to Aftercare guests to distribute digital surveys. Each survey had either a physical or digital copy of the flowchart available to use as a reference.
5. Participants turned in completed in-person surveys, and these were kept in a new folder for each date the survey was obtained. Digital survey responses were accessed through ECU's Qualtrics software. The digital surveys were completed independently, or guests scheduled a 10-minute Zoom meeting with the project leader to ask questions.

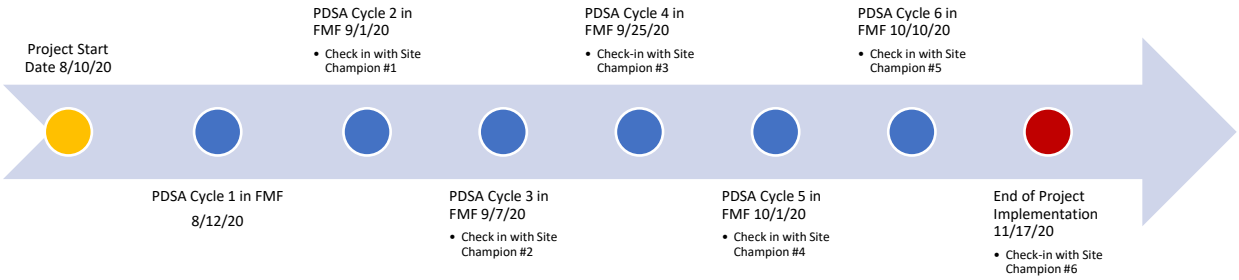
6. All survey response data were recorded within an SPSS spreadsheet. The original in-person survey copies were kept in a secure location; these physical copies were obtained from VISTA volunteers by scanning these papers and sending them digitally to the project leader in a secure format.
7. The PDSA worksheet notes and the survey data were used to study the results of that cycle; a plan and objective for the following cycle were then constructed.
8. PDSA cycles were implemented until a functional health insurance enrollment flowchart is developed.
9. Check-ins occurred monthly with the site champion to update them of the project progress and receive project guidance.

Timeline

Project implementation occurred during the Fall 2020 academic semester, which was from August 10 to November 17, 2020. The details of the timeline are seen in Figure 3.

Figure 3

DNP Project Implementation Timeline



Section IV. Results and Findings

Results

This DNP project measured qualitative data. The project's objective was to establish a process to decrease health insurance enrollment process barriers. Isolating a quantitative value to reflect barrier reduction proved difficult to present as an outcome measure. The concept of health insurance enrollment barriers cannot be clearly nor directly quantified, but this project provided process measures using the DNP data collection tool. Thus, data collection was realistically approached with the understanding that there would not be a direct quantitative outcome measure but rather qualitative process measures. One such process measure shows the number of NEST individuals with health insurance coverage during the three months of data collection seen in Table 1, which were obtained from FMF's Director of Residential and Support Services. The total NEST population and the percent of individuals without any type of health insurance coverage between September to November 2020 are both listed in Table 1. There were no data available for the Aftercare population.

Table 1

Health Insurance Status of FMF NEST Individuals

Insurance Status	Month[a]		
	September	October	November
None	9	11	10
Medicaid	35	54	56
Private	1	1	1
Total	45	66	67
Percent without Insurance	20%	16.7%	14.9%

[a] All months occurred in the year 2020

There were 16 total participants in the DNP data collection tool survey, but one respondent did not answer any of the questions upon online submission. The only quantitative

data within the project lies in the demographic survey data, which was obtained to describe the project population.

Demographic Data

Age. The mean age of participants (n=15) is 33.33 (SD 8.53) years old. The participants' median age is 32 years old. The youngest respondent is 20 years old, while the oldest is 50 years old. There is no mode identified in the data collection tool.

Number of Children Under 21 Years Old. Out of 16 participants, one did not fill out this question. The survey shows that all respondents (n=15) have a child under 21 years old living with them.

Health Insurance Status. Out of 16 participants, one survey was not filled out. There were 15 respondents, of which five participants did not have health insurance (33.3%), while 10 have health insurance (66.7%).

Lost Health Insurance in the Last Year. Out of 16 project participants, one respondent did not answer this survey question. Three respondents (20%) lost insurance in the last year, while 12 respondents (80%) did not lose insurance in the previous year.

Number of People Living in the Household. There were 15 survey respondents for this question. The mean number of reported people living in a respondent's household is 2.87 (SD 1.302) people. The median and mode for the number of people living in a participant's household are both three people. The data shows that 33.3% of respondents had three people living in their household, 26.7% have four people, and 20% have two people in their household.

Household Monthly Income. Two respondents out of 16 participants did not respond to this question. Out of the 14 respondents, one indicated that their monthly income is "29000," which is an outlier in the data set. The survey data reflects that 42.9% of respondents (6

respondents) reported no monthly income. Thirteen people (92.9%) reported that they make $2400 or less a month.

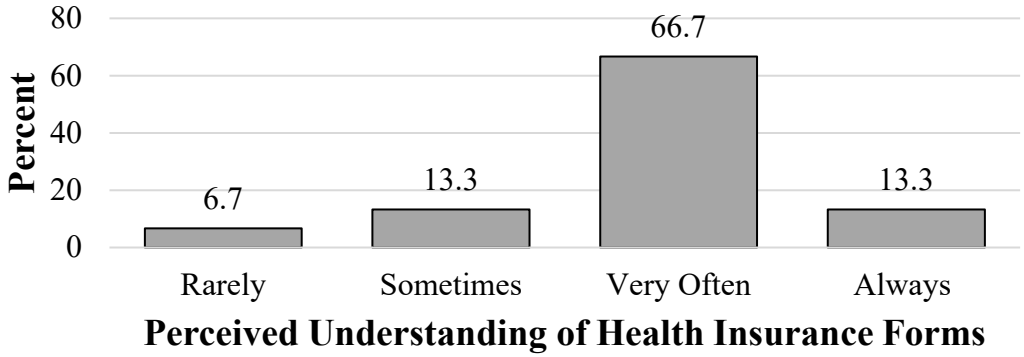
Reported Diagnosed Disability. Fifteen participants responded to this question, while one participants left this question blank. Out of the 15 responses, 60% of respondents (9 people) were diagnosed with a physical, mental, or emotional disability. On the other hand, 40% or respondents (6 people) reported never having been diagnosed with a disability.

Project Specific Data

Health Insurance Form Understanding. Figure 4 shows that ten respondents (66.7%) indicated that they "very often" understand health insurance forms. Two respondents (13.3%) indicated that they "always" understand these forms, and another two respondents stated they "sometimes" understand. Only one respondent (6.7%) indicated that they "rarely" understand health insurance forms.

Figure 4

Respondent Answers if They Understand Health Insurance Forms

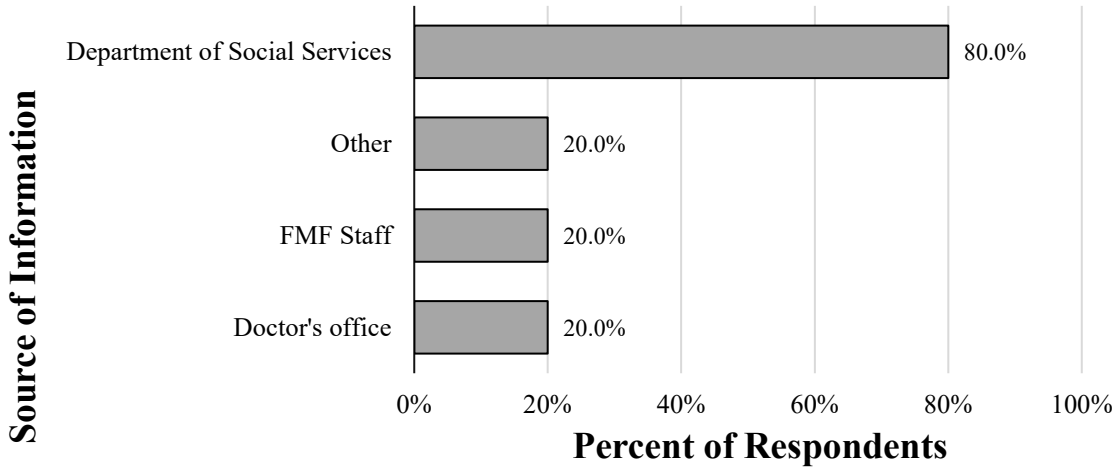


Where to Get Health Insurance Information. Out of all responses (n=15), 12 respondents (80%) indicate that they obtain their health insurance information from the Department of Social Services as seen in Figure 5. There were only three respondents (20%) that

indicated they would get their information from the doctor's office. Obtaining information from the FMF staff also was only chosen by three respondents (20%).

Figure 5

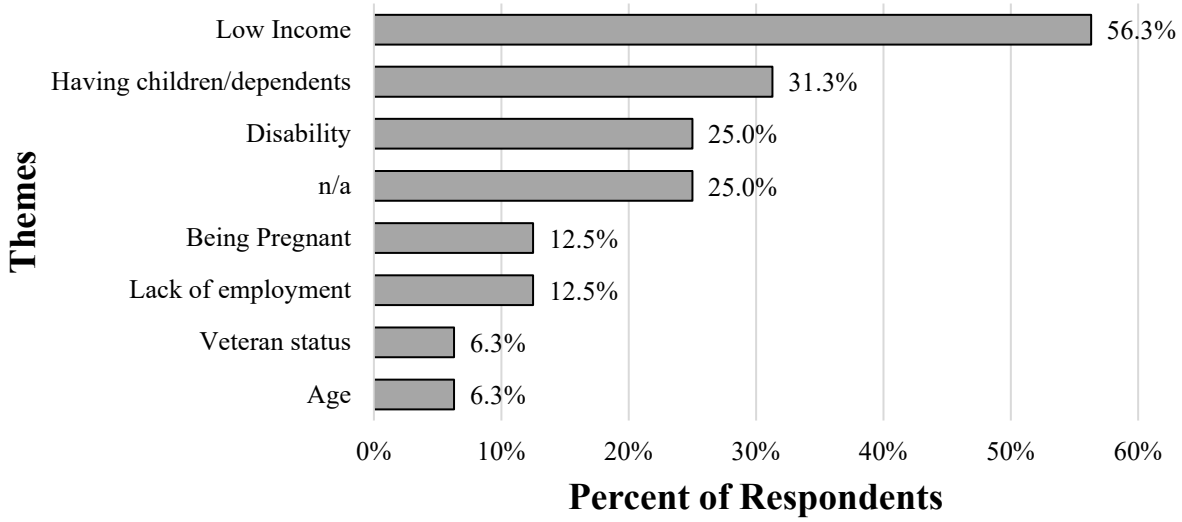
Where to Get Health Insurance Information



Perceived Criteria of Medicaid Eligibility. Question ten within the DNP project data collection tool seen in Appendix C is an open-ended question that asked the participant to list their perceived eligibility criteria for Medicaid. All responses were coded into themes, which were translated into data within SPSS for analysis as seen in Figure 6. Out of the 16 participants, three left this section blank, and one participant answered, "You always open to help," which was coded as "n/a" because it does not answer the question posed. The survey showed that 56.3% of respondents identified "low income" as a Medicaid eligibility criterion. Having children and dependents (31.3%) and having a disability (25%) were also identified as popular perceived criteria for Medicaid eligibility.

Figure 6

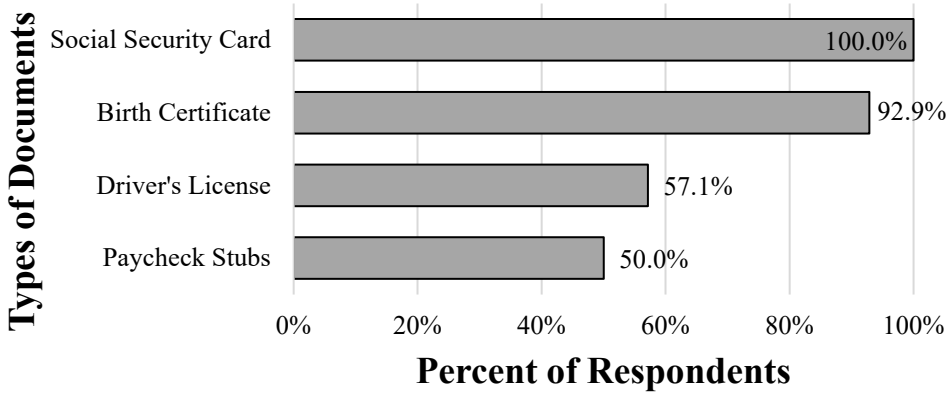
Themes of Perceived Medicaid Eligibility Criteria



Documents That Can Be Used to Apply for Medicaid/Health Insurance. Fourteen participants responded to this question. As depicted in Figure 7, all the survey question respondents indicated that a social security card is a document that can be used to apply for Medicaid or another type of health insurance. A large majority (92.9%) of respondents also indicated a birth certificate is an important document to apply for health insurance. Slightly more than half the respondents (57.1%) indicated that a driver's license could be used to apply for health insurance. Only half of the respondents (50%) indicated that their paycheck stubs could be used to apply for insurance.

Figure 7

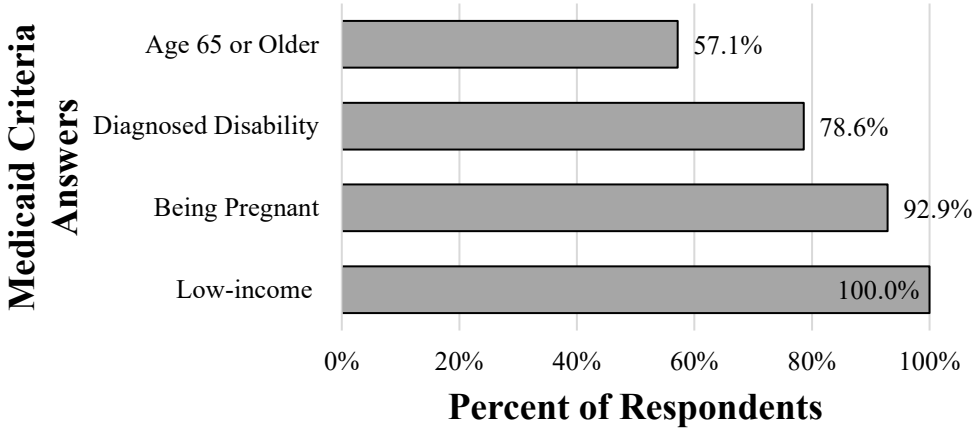
Perceived Documents that Can Be Used to Apply for Health Insurance



Knowledge of Medicaid Eligibility Criteria. Participants received the insurance enrollment flowsheet as a reference before starting this question and were instructed to use the flowsheet to answer the rest of the survey questions. Out of the 16 total participants, 14 (87.5%) responded to the question "What makes you eligible for Medicaid?" All respondents indicated that low-income could be a Medicaid qualifier, and a large majority of respondents (92.9%) indicated that pregnancy is a criterion for qualification seen in Figure 8. A considerable majority of respondents (78.6%) also reported that a diagnosed disability is a criterion for Medicaid coverage. Only slightly more than half (57.1%) of respondents indicated that age above 65 years old qualifies as a Medicaid eligibility criterion.

Figure 8

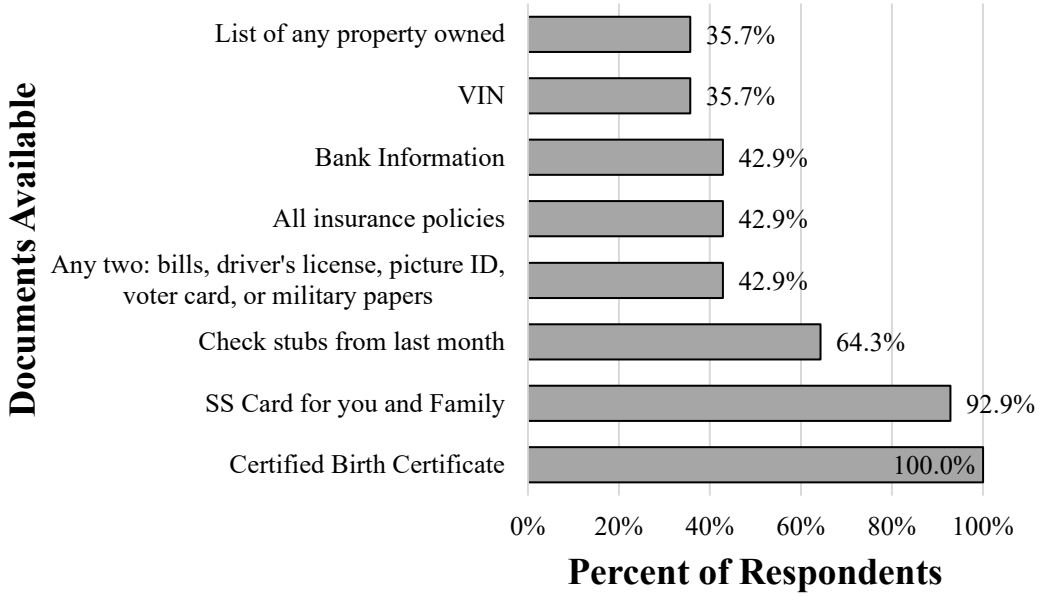
Answers to Medicaid Eligibility Question



Document Checklist. There were 14 participants (87.5%) who responded to this question out of the 16 survey participants. As seen in Figure 9, all respondents indicated that they already have their birth certificate, and a large majority (92.9%) have social security cards for their family unit. A majority of respondents (64.3%) have also indicated that they have a paycheck stub from their last month of work for health insurance applications. Less than half of the respondents indicated that they have the other documents listed within this survey question.

Figure 9

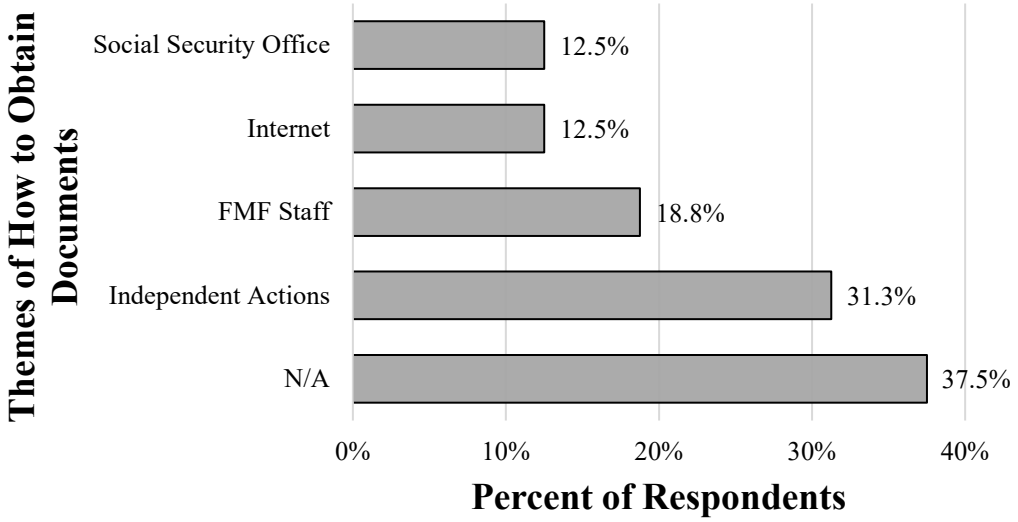
Documents on Hand and Available to Apply for Health Insurance



Obtaining Missing Documents. The were 16 responses for this survey question, which included non-answers. One respondent wrote, "I have all my documents its something they messed up in the system," which was coded as "N/A" since the answer suggests that no records were missing. As seen in Figure 10, respondents' most common act is to independently take action to obtain their missing documents (31.3%). Only 18.8% of respondents indicated that they would ask FMF staff for help to obtain these missing documents. Lastly, browsing through the internet (12.5%) and going to the social security office (12.5%) were minimally reported as ways to obtain any missing documents.

Figure 10

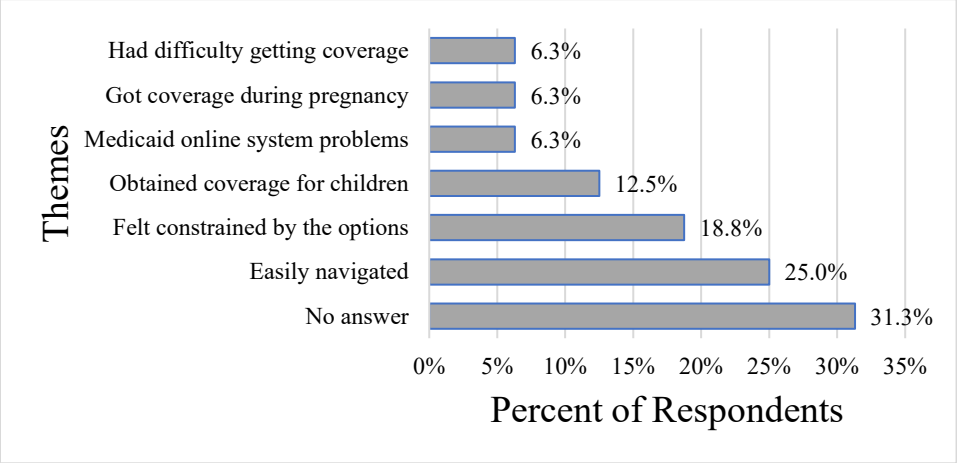
Themes Elicited With How to Obtain Missing Documents



Previous Health Insurance Enrollment Experience. Participants were asked to describe in as much detail their previous experience when they engaged with health insurance enrollment. These coded results are depicted in Figure 11. Most participants that wrote an answer (25%) indicated that they were able to easily navigate through the enrollment process. The second most reported theme reported by 18.8% of participants stated that the options for enrollment felt constrained. Thirdly, more than a tenth of participants (12.5%) reported that they also obtained insurance coverage for their children the last time they engaged with the health insurance enrollment process.

Figure 11

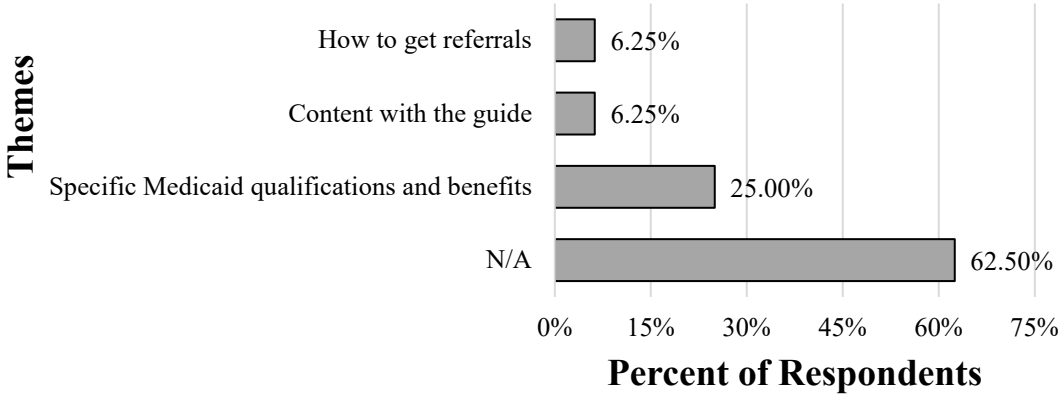
Themes of Prior Experience with Health Insurance Enrollment



What to Include in the Insurance Enrollment Guide. This open-ended survey question elicited 16 responses, in which ten respondents (62.5%) did not have any input to the question of "What information would be helpful in the insurance enrollment guide?" Figure 12 illustrates that out of the respondents, four (25%) indicated that they would have liked to see specific Medicaid qualifications and benefits, which included answers such as "Qualifying incomes" and "How to get a child on Medicaid." Only one respondent (6.25%) indicated that they are content with the flowsheet. One respondent wrote "referrals" as a response to this question.

Figure 12

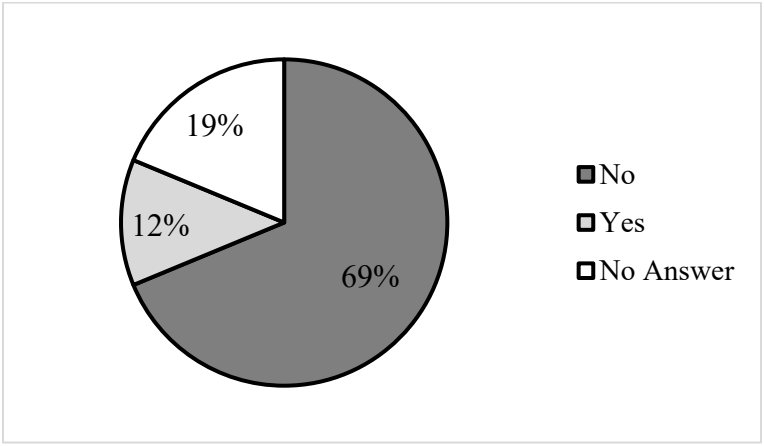
Themes Suggesting What to Include in the Insurance Enrollment Guide



Utilization of the Insurance Enrollment Flowsheet. Only two participants (12.5%) indicated that they used the insurance enrollment flowsheet to sign up for health insurance, as seen in Figure 13. A large majority of project participants (68.75%) indicated that they had not used the flowsheet to sign-up for health insurance. Almost a fifth (18.75%) of the project participants did not answer this question.

Figure 13

Percentage that Used the Flowchart to Attempt Health Insurance Enrollment



Outcomes Data

The DNP project data collection survey included 16 total questions. Seven of these questions were demographic questions to describe the population, while nine questions elicited qualitative data to help illustrate process measures.

This project was solely focused on process measures. The process measures from this project are (a) the monthly percent of uninsured adults in the NEST during implementation, (b) perception of a participant's ability to enroll in health insurance, (c) perception of a participant's knowledge regarding eligibility requirements for Medicaid, (d) perception of flowsheet usability to a participant, (e) which important insurance documents a participant already has, (f) how a participant plans on obtaining any missing documents, (g) a participant's previous health insurance application experience, (h) what information would be helpful in the flowsheet, and (i) if a participant has used the flowsheet in trying to sign up for insurance.

There were no outcome measures for this DNP project. The nature of the project design does not lend itself to purely quantitative measurements. A direct quantitative measure of barrier reduction with health insurance enrollment is multifactorial, and therefore a difficult concept to quantify. Insurance enrollment barrier reduction consists of understanding the potential root causes of individuals' struggles and finding a theme that can guide a new process to be integrated into the daily FMF workflow. Therefore, qualitative process measures were used to illustrate the project data in lieu of directly measuring insurance enrollment barrier reduction.

Discussion of Major Findings

Expected Gaps

Prior to starting this project, several gaps were expected to be encountered. One of these expected gaps is that participants will have a low level of knowledge regarding the insurance

enrollment process and have low administrative preparedness levels. Since they are constantly in contact with FMF staff, participants were also expected to utilize these personnel as resources for health insurance enrollment. When asked about any input regarding improving the flowsheet, it was expected that most participants would want specifics regarding qualifications and income limits for health insurance enrollment. Thus, this led to the expectation that the first iteration of the health insurance enrollment flowsheet is not specific enough for this population. Additionally, it was expected that no one would have used the flowsheet as a tool to try and sign up for insurance after implementation.

Actual Gaps from Project Results

The percentage of project participants who perceived their social security card and birth certificates as necessary to apply for health insurance closely resembled the percentage of participants who reported these documents were readily on hand. In contrast, the other documents needed to apply for health insurance were neither perceived as necessary nor were they identified as readily on hand as reflected in Figure 7 and Figure 9.

Participants' extent of knowledge regarding Medicaid eligibility is lacking; the only answer that elicited a majority response was the perceived criteria of having low income (56.3%). This is starkly different from the 100% response rate in identifying “low income” as a criterion when participants were asked Medicaid eligibility criteria using the flowsheet. The criteria of disability, pregnancy, and age also had starkly increased percentages compared to participant perceptions when the flowsheet was used as a reference to identify Medicaid eligibility criteria as seen in Figure 6 and Figure 8.

Without the flowsheet as a reference, more than 75% of participants chose to pursue health insurance enrollment information and help with obtaining documents directly with the

DSS, while less than a quarter identified FMF staff. When given the flowsheet, which identifies both the DSS and FMF staff as resources for health insurance information and obtaining important documents, only 12.5% identified the DSS and 18.8% chose FMF staff members as sources of help. These findings are noted within Figure 5 and Figure 10.

Section V. Interpretation and Implications

Cost Benefit Analysis

This project's primary cost to the organization was the time it took to put together the logistics. Notably, it cost the VISTA volunteers roughly one to two hours daily during project implementation to elicit interest with the NEST and Aftercare populations to fill out the survey, rather than investing time in the day-to-day logistics needed for the organization. Additionally, it would have cost an estimate of about ten cents per page to have the two-page survey printed for those who decided to fill it out by hand. This project also requires roughly one hour for FSCs to learn and integrate the flowsheet into their toolkit. An FMF personnel will also need to invest roughly one to two hours of time quarterly, or more often as needed, into updating the flowsheet based on any health insurance process changes or guest feedback for better usability. Overall, the time investment moving forward will be minimal and outweighed by the benefits reaped by FMF guests. One of FMF's goals is for every household to have either SNAP benefits or health insurance (A. Tropiano, personal communication, April 24, 2020). This project would certainly help meet FMF's goals by diversifying the non-cash benefits families would obtain.

Since families already seem to have a sense of pursuing health insurance information independently based on the survey data, integrating the insurance enrollment flowsheet into the FSC workflow would supplement a characteristic that FMF aims to develop within their guests. The FSCs are integral in helping families to identify their support systems (FMF, 2019). This flowsheet helps place that decision-making into the control of FMF families. Flowsheet incorporation requires minimal training and assists FSCs in encouraging families who show interest in engaging with the health insurance process to continue to rely on their sense of self-sufficiency.

Unexpected negatives included a global COVID-19 pandemic, which delayed communication between all project party members. The FMF staffs' increased demands to keep their guests safe took time away from prompt email communications. These altered priorities caused a delay in project implementation but did not hinder its completion. Additionally, the lack of initial participation with the NEST guests delayed project implementation. Participation only began when the VISTA volunteers helped directly engage the guests to participate in this project. The slow participation delayed the flowsheet improvements and integration into the FSC workflow.

Resource Management

The success of this DNP project required the utilization of FMF's resources such as (a) VISTA Volunteers, (b) a professional Zoom account, (c) at least one printer on-site, and (d) accessible computers for the guests in the NEST. With regard to the Aftercare population, the project relied on them having reliable computer or smartphone access to participate in the project.

As an unforeseen limitation of the global Coronavirus pandemic, direct interaction with guests was not allowed. Physically administering the surveys would have been feasible if medical-grade personal protective equipment were available to engage with FMF guests directly.

An integral part of the survey administration's success is the VISTA volunteers' involvement, and they should have been integrated into the team earlier. They made it possible to implement the project through direct communication with the NEST and Aftercare guests they already built a relationship with. The volunteers in the organization can be essential assets to influence successful project outcomes.

Implications of the Findings

Implications for Patients

A clear finding identified by the DNP project data collection tool is that participants' perception of Medicaid eligibility criteria is inaccurate. The use of the insurance enrollment flowsheet clearly heightened their knowledge of Medicaid eligibility criteria. Thus, this knowledge gap is a problem addressed by having an easily accessible tool for FMF adults which succinctly summarizes Medicaid criteria.

The findings regarding the process measure of administrative preparedness also yielded implications for FMF adults. Survey data indicates that social security cards and birth certificates are both perceived as important documents, and forms that are already on hand for a large majority of individuals. Otherwise, it was clear that many respondents did not perceive the other listed documents as usable in health insurance enrollment nor were these readily on hand. Therefore, a potential area for process improvement needs to investigate how to heighten administrative preparedness. Along with helping FMF adult administrative preparedness, future process improvement projects need to increase the target population's awareness of what documents are necessary aside from social security cards and birth certificates. A comprehensive approach to administrative preparedness would best serve the targeted population in their ability to successfully enroll in health insurance.

This project population appears to act self-sufficiently when pursuing more information about health insurance enrollment based on the survey data. While this is a positive attribute that FMF wants to encourage in their guests, the data implies that their self-sufficiency leads them to utilize resources inefficiently. The data shows that only 18.8% of the respondents would ask FMF staff to help them gather the required documents and provide health insurance enrollment

information. There was also no increase in the percentage of respondents that chose FMF staff as a resource, even if it was one of the options listed for sources to obtain more help within the health insurance enrollment flowsheet. The project participants' drive to pursue information from the DSS shows a strong sense of self-sufficiency and autonomy, which are characteristics that can be channeled towards realistic and actionable measures. Work must now be done to increase this population's awareness of other easily available resources in addition to the DSS. Future projects should address how to direct this populations' drive to diversify their health insurance information sources, and more effectively seek out readily available resources such as FMF staff.

Implications for Nursing Practice

This project has implications for understanding how to provide care for people that are homeless. The project required an interprofessional approach to help address the barriers to health insurance enrollment. Collaborative relationships between nursing, social work, and non-profit organizations were of utmost importance in positively influencing health outcomes with a marginalized population.

Outlining the essential steps to enroll in health insurance through a flowsheet can help people connect and actively engage with the health system. This population has shown that they are more than willing to engage with the process of insurance enrollment, but do not utilize their resources at hand effectively, such as FMF staff like the FSCs. A multidisciplinary effort must be made for FMF guests to actively and effectively utilize their resources to support the task of enrolling for health insurance. Thus, nursing research should further investigate how this population can be better engaged with the resources available, and the what factors influence these decisions.

Impact for Healthcare System(s)

Even though health insurance barrier reduction is a difficult concept to quantify, steps need to be taken to start understanding and reducing these barriers now. Barrier reduction helps to make the path to improve the Healthy NC 2030 goal of decreasing the rates of uninsured adults (NCIOM, 2020). Individuals with Medicaid health insurance coverage are shown to have more access to preventative care and better health outcomes (Han, Nguyen, Drope, & Jemal, 2015). In implementing this DNP project, the groundwork has been set to increase engagement with the health insurance enrollment process and reduce the uninsured rates of FMF adults.

In line with the Healthy NC 2030 goal, FMF's rate of uninsured adults have decreased from 20% to 14.9% during project implementation. As encouraging as this finding is, the project was not designed to study the potential direct effects on FMF's uninsurance rates. Future investigations need to identify how an insurance enrollment flowsheet affects uninsurance rates.

This flowsheet has set up a more streamlined process for the FMF guest interested in engaging with health insurance enrollment. If families have questions about the process, the FSC can be their first point of contact and then directed to the correct agency (i.e. DSS). Aside from the FSCs, VISTA volunteers can also serve as a point of initial contact from which the health insurance enrollment flowsheet can be obtained. This flowsheet provides FMF with a tangible tool to open the discussion for engaging with the insurance enrollment process.

Sustainability

The FMF Director of Residential and Support Services has already provided the DNP Project's flowchart to the FSCs, and have easily integrated it into their toolbox. This is a tool to be given out as much as possible to anyone voicing an interest in health insurance enrollment, thus it does not require specialized training. Since FMF already has computers that NEST or

Aftercare guests can access on-site, the flowchart can also be distributed digitally. Paper copies of the computer flowsheet will only cost several cents on the dollar per sheet printed. Adding the flowsheet can be continued for the foreseeable future since its cost will not require FMF to restructure its finances or expenditures drastically. Overall, this project seems to be a low-cost intervention that FMF has integrated into its toolkit.

Dissemination Plan

The information from this DNP project will be disseminated through several avenues. Firstly, the project will be presented in the ECU DNP Poster Presentation on April 6, 2021 through a digital platform. The aim of presenting this project to DNP colleagues is to broaden their vision to influence positive health outcomes outside the hospital realm and address the social determinants of health with a nursing perspective. Secondly, a presentation to the FMF board members is also a targeted audience to present this DNP project in Spring 2021, which will likely also be on a digital platform as necessitated by pandemic precautions. The goal of sharing this presentation with FMF is to convey the importance of quality improvement work and identify future interventions to augment insurance enrollment barrier reduction. Lastly, this DNP project paper will be published and uploaded into ECU's "The ScholarShip," which is a digital academic archive for ECU. This would allow other ECU academics and scholars to reference as well as build upon the findings of this project.

Section VI. Conclusion

Limitations

This DNP project encountered numerous limitations in the process of planning, implementation, and evaluation. Initially, the plan was to implement the project in-person, but the goal quickly changed due to the COVID-19 global pandemic. In-person survey administration would have allowed opportunities to prompt participants to elaborate on short answers provided during the open-ended survey questions. Unfortunately, any survey meetings occurring through an online video platform can create an impersonal ambience compared to the personal human connection established with face-to-face engagement. The lack of connection and rapport may deter participants from actively engaging with the survey administrator. Thus, this impersonalization forms a type of communication gap that may have contributed towards short and unclear answers to the open ended survey questions. Another limitation was that all project communication occurred through email, which sometimes took days to weeks before a proper reply was received. The pandemic's increased demands on ensuring guest safety and logistics made working on the project more difficult. Additionally, it was challenging to heighten the project's visibility with the target project population without being on-site.

The implementation phase also had unforeseen limitations. The VISTA Volunteers that elicited FMF guest interest in the survey did not ask participants to elaborate on any questions. Their hands-off approach was much appreciated in ensuring answers were provided independently by participants. Nevertheless, their instructions should have urged participants to elaborate when possible to aid in improving the flowsheet.

When evaluating the project, it becomes apparent that the project scope itself is a limitation. Since the scope is focused on barriers affecting health insurance enrollment (i.e. the

HSU stage of Healthcare Seeking), there is no established and validated manner to quantify barrier reduction appropriately. Therefore, project results cannot directly describe how these barriers towards this HSU are affected.

During project implementation, an apparent barrier is that there was no control or assurance of completion with the guests that sign-up to take the survey. As an example, one guest who signed-up did not show up for their Zoom appointment and could not be reached for follow-up on their cellphone. Another guest had unforeseen work responsibilities that caused them to miss their Zoom appointment. In addition to the uncertainty of completion, project participant interest was difficult to elicit. Interest in completing a survey during their free-time was a difficult request for this population. Their self-care and health have continuously been neglected for their priorities lie in the day-to-day insecurities they are trying to manage (A. Tropiano, personal communication, April 24, 2020). Any kind of extracurricular activity, no matter how minimal the time commitment is, can serve as another life stressor to this project population leading to the lack of engagement.

Recommendations for Others

Planning Recommendations

In future studies involving the flowsheet used in this DNP project, it would be greatly beneficial for investigators to understand the population's demographic makeup to tailor the flowsheet for this population. Due to the known income eligibility criteria of the different Medicaid coverages, having a clear picture of this population's demographic information, such as their financial standing, prior project implementation would help structure the flowsheet to reflect the population's needs. Future investigators should also have a good understanding of who the FMF stakeholders and key personnel are. For this project that began in September, the

VISTA volunteers were not included within the project team until mid-September. Early understanding of project roles and which personnel needs to be involved in the team leads to a more efficient implementation.

Additionally, a project member needs to be designated to solely elicit interest in participating in the project given the numerous life priorities of this patient population. A primary investigator could do this, but pandemic precautions deter any direct contact with this population, creating a gap between investigators and the population. Thus, an FMF personnel in direct contact with the target population would be the best role to inform guests and illicit interest about the project.

Future projects should also identify processes to help FMF maintain accurate records of health insurance coverage status of the individuals within the Aftercare program. These individuals have began their transition into stability, therefore understanding their needs holistically, which includes their health insurance status, needs to be studied.

Implementation Recommendations

Survey administrators should be advised to instruct participants to be as thorough as possible when answering open-ended questions. This helps to understand a participant's thought process and minimizes the potential for misinterpretation. Thoroughly answered questions provide a richer picture of the barriers faced by this population. Thus, investigators must explicitly provide clear survey instructions to respond with as much detail as possible within open-ended survey questions.

Evaluation Recommendations

The last question of this project's survey indicated that two participants used the insurance enrollment flowsheet to sign-up for health insurance. Future projects need to elicit

more information when participants suggest that they have used the flowsheet. Questions should be asked to understand how, when, and why they choose to use the flowsheet to better understand their decision-making. Additionally, more information should be elicited regarding how participants decide to select the resources to help them apply for health insurance. Open-ended questions should explore why project participants do not think to utilize easily accessible resources, such as the FSCs, as a primary source of health insurance enrollment information. The details in these thought processes would help portray the themes that influence these HSU decisions.

Recommendations for Further Study

This project shows that there are still numerous avenues that need further research. One of the most glaring is gaining more insight into quantifying barrier reduction for health insurance enrollment. The other HSU stages also need to be explored to understand this population's engagement with the health insurance enrollment process. In addition to the different HSU stages, the various barriers affecting each stage should be studied and investigate how they can be quantified. Lastly, the gaps noted in the various process measures within this project need to be addressed so that factors like administrative preparedness, knowledge of eligibility criteria, and self-sufficiency do not act as barriers towards health insurance enrollment.

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Wadhera, R. K., Choi, E., Shen, C., Yeh, R. W., & Joynt Maddox, K. E. (2019). Trends, causes, and outcomes of hospitalizations for homeless individuals: A retrospective cohort study. *Medical Care, 57*(1), 21-27. https://doi.org/10.1097/MLR.0000000000001015

White, B. M., Jones, W. J., Moran, W. P., & Simpson, K. N. (2016). Effect of the economic recession on primary care access for the homeless. *Journal of Health Care for the Poor and Underserved, 27*(3), 1577-1591. https://10.1353/hpu.2016.0104

White, B. M., & Newman, S. D. (2015). Access to primary care services among the homeless: a synthesis of the literature using the equity of access to medical care framework. *Journal of Primary Care & Community Health, 6*(2), 77–87. https://doi.org/10.1177/2150131914556122

Winkelman, T. N. A., Segel, J. E., & Davis, M. M. (2019). Medicaid enrollment among previously uninsured Americans and associated outcomes by race/ethnicity—United States, 2008-2014. *Health Services Research, 54*(1), 297-306. https://doi.org/10.1111/1475-6773.13085

Appendix A

Literature Search Log

Date of Search	Database	Key Word Searches	Limits	# of Citations Found / Kept	Rationale for Inclusion / Exclusion (include rationale for excluding articles as well as for inclusion)
4/13/2020	CINAHL	(MH "Homelessness") AND (MH "Health Services Accessibility") AND (MH "Insurance, Health")	2015-2020, English, Peer-reviewed, Human	1 found, none kept	Excluded 1 r/t pediatric population
4/14/2020	CINAHL	(MH "Homeless Persons") AND (MH "Health Services Accessibility") AND (MH "Medicaid")	Five year period, English, Peer-reviewed, Human	7 found, 5 kept	Excluded 2 r/t focus on veteran subpopulation, and pediatrics.
4/15/2020	CINAHL	(MH "Homelessness") AND (MH "Health Services Accessibility") AND (MH "Insurance, Health")	Five year period, English, Peer-reviewed, Human	4 found, 2 kept	2 repeats, 2 excluded r/t focused on subpopulation with X-disease
4/15/2020	CINAHL	(MH "Homeless Persons") AND (MH "Health Services Accessibility") AND (MH "Insurance, Health")	Five year period, English, Peer-reviewed, Human	4 found, 2 kept	2 repeats, 2 excluded r/t focused on subpopulation with X-disease

4/15/2020	CINAHL	((MH "Insurance, Health") OR (MH "Medicare") OR (MH "Insurance, Health, Reimbursement") OR (MH "Health Insurance Exchanges")) AND ((MH "Homelessness") OR (MH "Homeless Persons")) AND ((MH "Health Services Accessibility") OR (MH "Healthcare Disparities"))	Five year period, English, Peer-reviewed, Human	7 found, 3 kept	2 repeat, 1 excluded r/t VA focused, 2 excluded r/t focused on subpopulation with X-disease, 1 excluded r/t pediatric population,
4/16/2020	CINAHL	((MH "Medicaid") OR (MH "United States Centers for Medicare and Medicaid Services")) AND ((MH "Homelessness") OR (MH "Homeless Persons")) AND (MH "Health Services Accessibility")	Five year period, English, Peer-reviewed, Human	9 Found, 6 kept	5 are repeats, 1 excluded r/t focused on HIV subpopulation, 1 excluded r/t Veteran focused, 1 excluded r/t pediatric population

4/18/2020	PUBMED	("Homeless Persons"[Mesh]) AND ((("Primary Health Care"[Mesh]) AND ("Medicaid"[Mesh] OR "health insurance" OR insurance OR "insurance enrollment")) AND "Health Services Accessibility"[Mesh])	Past 5 years + English + Human	2 found, both kept	Both results kept because they focused on the homeless population and accessing primary care services
4/20/2020	ECU OneSearch	"self efficacy" AND "housing insecurity" AND "access to care" AND (insurance OR enrollment OR Medicaid OR "health insurance")	Scholarly & Peer-reviewed, "Last 5 years", Adult, Adults, English,	4 Found, 2 kept	2 excluded due to a focus on a different subpopulation of individuals that are homeless with HIV,
4/22/2020	ECU OneSearch	homeless AND "health service utilization" AND barriers AND desire AND seeking	Scholarly & Peer-reviewed, "Last 5 years", Adult, Adults, English,	17 results, 1 kept	1 Ireland study kept r/t useful Model to explain HSU of homeless, 6 study excluded r/t based in Brazil, Canada, Nigeria, 1 excluded r/t Rural population, 1 excluded r/t topic focused on post-homeless situation, 2 excluded focused on oral health, 1 focused on HIV population, 1 focused on non-homeless post-release-from-prison population, 1 focused on non-homeless population, 1 focused on smoking with homeless women, 1 excluded focused on Veterans, 1 excluded r/t inpatient focus

4/22/2020	PubMed	barrier to healthcare AND homeless AND "insurance"	Past 5 years + English + Human	14 results, 5 kept	3 repeat, 1 kept r/t homeless young adults, 2 excluded r/t based in Germany/France, 1 excluded r/t focused on subpopulation of transgender women, 1 kept r/t comparison of homeless vs non-homeless adults, 5 excluded r/t focused on X-medical condition (Hep C, DM, HTN) for homeless, 1 excluded r/t excluded homeless population,
4/22/2020	PubMed	"Homeless Persons"[Mesh]) AND ((("Primary Health Care"[Mesh]) AND ("Medicaid"[Mesh] OR "health insurance" OR insurance OR "insurance enrollment")) AND "Health Services Accessibility"[Mesh])	2015-2020 + English + Human	2 results, 2 kept	1 repeat, 1 kept r/t focus on homeless population's access to healthcare

Appendix B

Literature Search Matrix

Citation	Year Pub	Article Title	Theory	Journal	Purpose and take home message	Design/Analysis/Level of Evidence	IV DV or Themes concepts and categories	Instr. Used	Sample Size	Sample method	Subject Charac.	Comments/critique of the article/methods GAPS
Mariano, M. A., & Harmon, M. J. (2019). Living libraries: Nurse integration in interprofessional homeless health care team. Public Health Nursing, 36(2), 172–177. https://doi.org/10.1111/phn.12561	2019	Living libraries: Nurse integration in interprofessional homeless health care team.	n/a	*Public Health Nursing*	Piloted interprofessional model (nurse, social work, librarian) in an urban library to address barriers to healthcare access for homeless	6; Pilot Project -- use of urban library to engage homeless to overcome health access barriers. **MODEL:** patron-centered interprofessional participation in the library	**health access barriers**	n/a	358	In-person; nurse, social worker, librarian. Kept track of referrals, followed-up on them 1 week later.	homeless, in library	**SYNTHESIS:** Barriers are rampant to gain access to insurance, and to access providers after gaining insurance for homeless people; they are disproportionately affected by

					individuals; high retention rate (i.e. completed referrals externally) of referrals to community health services. Goal to connect them to info and increase awareness of low or no-cost health resources.							lack of access to health services. These barriers push their health service utilization to NOT BE cost-effective (i.e. missing appt, going to emergency room). HAVING INTERPROFESSIONAL GROUP CAN HELP DECREASE NO-SHOWS AND INCREASE IDEAL HEALTH

												UTILIZATION. **LIMITATION:** no financial estimation of health cost-savings. **USEFULNESS:** Place based health care delivery -- beneficial is place is EASILY ACCESSIBLE
Koh, K. A., Racine, M., Gaeta, J. M., Goldie, J., Martin, D. P., Bock, B., Takach, M., O'Connell, J. J., & Song, Z. (2020). Health Care Spending And Use Among People Experiencing Unstable Housing In The Era Of	2020	Health Care Spending And Use Among People Experiencing Unstable Housing In	n/a	*Health Affairs*	SYNTHESIS: ACO's need to look into the social determinants, i.e. housing stability, if they	4: COHORT study;	ACO reimbursement; financial savings; health service utilization; health spending	n/a	402 (<65yo)	longitudinal data from MA Medicaid program 2013-2015;	< 65yo, continuously enrolled in Medicaid from 2013-15	**COMMENTS:** Focused on how to improve finances for ACO, pressured because ACOs have to be responsible in figuring

Accountable Care Organizations. Health Affairs, 39(2), 214–223. https://doi.org/10.1377/hlthaff.2019.00687		The Era Of Accountable Care Organizations			want to budget for efficient care delivery towards a vulnerable population that has housing instability.							out not only how to get properly reimbursed by Medicare, but ALSO ***how to save money by efficiently taking care of vulnerable*** populations. Examined how vulterable population (i.e. homeless) affects their monies flow compared to stably housed people. ***HOMELESSNESS***

												TOTAL SPENDING IS MORE THAN STABLY HOUSED. HOMELESS HAVE HIGHER RISK OF EXPECTED SPENDING FACTORS OF 1. LARGER DISEASE BURDEN AND 2. UNSTABLE HOUSING.
Parker, R. D., Cima, M. J., Brown, Z., & Regier, M. (2018). Expanded medicaid provides access to substance use, mental health, and physician visits to	2018	Expanded medicaid provides access to	n/a	*Journal of Community Health*	Purpose: To describe the Medicaid costs and services	4; Retrospective study 2012-15	Medicaid costs, health utilization	n/a	19950	Retrospective study of Medicaid data	18yo and above	**COMMENTS**: Homeless health spending is A LOT with psych issues;

homeless and precariously housed persons. Journal of Community Health, 43(2), 207-211. doi:http://dx.doi.org/10.1007/s10900-017-0405-9		substance use, mental health, and physician visits to homeless and precariously housed persons			used with homeless individuals; how do homeless people utilize Medicaid?							need to find a way in their health service chain to save $$$. Increased enrollment to Medicaid DOES NOT MEAN INCREASED PCP ACCESS r/t slew of logistic deterrents and physical disability!!! ***Homeless and people in emergency shelters COST THE MOST PER

												HOSPITALIZATION AND ED USE assumed due to ***poor PCP connection*** !!! **SYNTHESIS:** Health utilization is still NOT IDEAL by homeless with medicaid; not utilizing primary care regularly. people WITHOUT MEDICAID typically are unstably housed, and

												utilized MH and substance abuse services A LOT. **<u>Critiques:</u>** The distinction between groups (i.e. homeless with medicaid, homeless without medicaid etc.) was not very well done.
Winetrobe, H., Rice, E., Rhoades, H., & Milburn, N. (2016). Health insurance coverage and healthcare utilization among homeless young adults in venice, CA. Journal of Public Health (Oxford, England), 38(1), 147-155.	2016	Health insurance coverage and healthcare utilization among homeless young	n/a	*Journal of Public Health*	assesses homeless young adults' health insurance coverage and healthcare utilizati	6; Multivariable logistic regression	n/a	n/a	125	self-administered questionnaire (2013)	young adult (12-25yo) accessing a drop-in center, majority are hetero	**Synthesis:** Young adults 18-24yo that are homeless have a lot of health needs, with which management is deterred by

doi:10.1093/pubmed/fdv001		adults in venice, CA			on prior to Medicaid expansion by the ACA.						sexual White male	a slew of barriers, including lack of insurance/cost of receiving care. Health insurance is correlated with increased health service utilization, but this study did not investigate how homeless with Medicaid's HSU vs. homeless without Medicaid's HSU (i.e. % going to ED, % going to

												PCP, etc.). STUDY NOT GENERALIZABLE. ***One of the reasons that homeless avoid community health clinic is the STIGMATIZATION of homelessness***
Fryling, L. R., Mazanec, P., & Rodriguez, R. M. (2015). Barriers to homeless persons acquiring health insurance through the affordable care act. The Journal of Emergency Medicine, 49(5), 755–62.e2. https://doi.org/10.10	2015	Barriers to homeless persons acquiring health insurance through the afforda	n/a	*Journal of Emergency Medicine*	to characterize (1) homeless persons' knowledge of the ACA, (2) identify barriers	6; cross-sectional survey (self-reported) via convenience sampling	**n/a**	n/a	134 homeless (out of 650 enrolled)	convenience sampling; 30-question survey	>18yo, adult pts in ED between 9am-5pm M-F, noncritically ill	**Synthesis:** This study showed a lapse in knowledge about Medicaid enrollment and eligibility with homeless individuals in the ED.

16/j.jemermed.2015.06.005		ble care act			to their ACA enrollment, and (3) determine access to various forms of communication that could be used to facilitate enrollment. **Homeless have less knowledge about ACA, what qualifications							The knowledge barrier (INTERNAL BARRIER) AND the logistics barrier (EXTERNAL BARRIER) (i.e. no means of communication for follow-up regarding enrollment process) further deters homeless from accessing regular care.

					are, and don't have phone/internet access for communication.**							
Wadhera, R. K., Choi, E., Shen, C., Yeh, R. W., & Joynt Maddox, K. E. (2019). Trends, causes, and outcomes of hospitalizations for homeless individuals: A retrospective cohort study. Medical Care, 57(1), 21-27. doi:10.1097/MLR.0000000000001015	2019	Trends, Causes, and Outcomes of Hospitalizations for Homeless Individuals: A Retrospective Cohort Study	n/a	*Medical Care*	Understand **how acute illness affects homeless**; evaluated patterns, causes, and outcomes of acute hospitalization among homeless persons	4; Retrospective Cohort Study	number of hospitalizations, cause of hospitalizations, length of stay, costs of stay	n/a	185,292 (homeless hospitalizations); 32,322,569 (nonhomeless hospitalizations)	Retrospective data from the State Inpatient Databases (SIDs) of the Healthcare Cost and Utilization Project	between 2007-13 in MA, FL, and CA.	**No reliable source of healthcare for homeless, who have high rates of MH and substance abuse disorders, are pushed to use acute care services. Homeless have LOW life expectancy, HIGHER mortality rates.

					compared with a demographics-standardized and risk-standardized nonhomeless cohort. **TAKE HOME:** Homeless individuals are getting hospitalized more and more over the years, and is typically due to an							***Lack of insurance is a deterrent to receiving longitudinal care; like mental health services. **GAP**: Data did not delineate between chronic, transiet, or formerly homeless. CANNOT BE GENERALIZED; only represents 3 states. **Synthesis**: Increased hospitalizations, lack of insurance,

					acute psychiatric disorder or substance abuse. Homeless had longer lengths of stay in hospital, but mean costs of care were LOWER. Policies need to be developed to shift a focus on ambulatory care for							and lack of MH longitudinal management are issues that need to be addressed by future policies to reduce costs. The barriers to receive health insurance and longitudinal treatment need to be the focus of these policies.

					homeless individuals; this should reduce acute care utilization and improve their health outcomes.							
Bell, J. F., Krupski, A., Joesch, J. M., West, I. I., Atkins, D. C., Court, B., Mancuso, D., & Roy-Byrne, P. (2015). A randomized controlled trial of intensive care management for disabled Medicaid beneficiaries with high health care costs. Health Services Research, 50(3), 663–689.	2015	A randomized controlled trial of intensive care management for disabled Medicaid beneficiaries	n/a	*Health Services Research*	comparing outcomes of disabled Medicaid beneficiaries with mental health and/or substance abuse	2; RCT with Intent-to-Treat Analysis	**IV:** Intensive Care Management with integrated behavioral and medical services **DV:** hospitalizations (i.e. ED,	n/a	KCCP intervention (n = 563) or wait-list (Medicaid per usual) control group (n = 251)	Washington State Department of Social and Health Services Client Outcomes	(a) enrollment in the Medicaid Categorically Needy program; (b) King County,	**Disabled medicaid beneficiaries, only 5% of medicaid enrollees but use more than half of medicaid spending! No studies describing how to care for these

https://doi.org/10.1111/1475-6773.12258		with high health care costs			problems and comorbid physical conditions randomized to the KCCP intervention with those of a control group.RESULTS: increased outpt mental health use, increased Rx drug costs, more inpt admissi		outpt services, inpt services, etc), costs with healthcare, housing			Database	WA, residence; (c) evidence of at least one chronic physical condition and a mental health problem, substance abuse disorder, or both recorded in state administrative	people. Medicaid expansion will include millions more that are uninsured, but these medicaid-eligible uninsured people have been shown to have uncontrolled complex comorbidities. CARE COORDINATION for newly enrolled has shown some promise, but its effects and health outcomes aren't well

					on without ED visits, less unplanned admissions, NO cost savings (since typically takes about 3-4 years before cost savings are realized), INCREASED CARE ACCESS--incr Rx drugs use, use of long-term care						databases (e.g., ICD-9-CM codes in Medicaid records, drug/alcohol treatment records; and (d) predicted future health care costs at least 50 percent higher than	described with complex disabled medicaid enrollees, which this study tries to address. Expected results of intensive case management for disabled medicaid pts with MH and/or SA problems are: decreased hospitalizations, costs with healchare, improved housing. care management programs

					services (in-home support), incr drug/alcohol tx costs. IF HAVE MEDICAID, CASE MANAGEMENT CAN IMPROVE HOUSING.						those of the average Medicaid Supplemental Security Income (SSI) recipient	targeted to high-cost, high-risk Categorically Needy Aged, Blind, and Disabled Medicaid beneficiaries with a high prevalence of addiction, serious mental illness, and other chronic conditions. **SYNTHESIS**: Intensive case management is a way to improve healthcare access to Medicaid recipients with

												complex medical and MH problems. It is a costly intervention but shows some promise in improving this population's health outcomes.
Virapongse, A., & Misky, G. J. (2018). Self-identified social determinants of health during transitions of care in the medically underserved: A narrative review. Journal of General Internal Medicine, 33(11), 1959-1967. doi:10.1007/s11606-018-4615-3	2018	Self-Identified Social Determinants of Health during Transitions of Care in the Medically Underserved:		*Journal of General Internal Medicine*	To identify the barriers and disparities with health outcomes in the population of the medically underse	5; Literature Review	**Access Failures, Social Fragility, Disease Behavior, Therapeutic Misalignment, Accountablility,**	Inclusion and Exclusion Criteria	17 peer-reviewed papers met inclusion criteria	Literature review, data extraction by authors	underserved group primarily comprised of Medicaid, uninsured, or homeless	**unrealistic and impractical to allow someone that is medically udnerserved to navigate their healthcare needs post-hospitalization **Access failures

		a Narrative Review			rved that are discharged from the hospital. Synthesis: Accessing healthcare post-hospitalization is just as difficult as it was before hospitalization for underserved populations. Health systems need to						adult persons;	(cost of care, access to care, transportation, and insurance status) along with Social Fragility (unstable housing, insufficient social support, lack of basic resources,financial strain, unemployment, lack of childcare) are 2 MAIN BARRIERS TO PROPER HOSPITAL

					evaluate their current policies of how they handle these patients after discharge, enlist the help of the community to build a more integrated health system, and targeted care management.							TRANSITION.
O'Carroll, A., & Wainwright, D. (2019). Making sense of street chaos: An ethnographic	2019	Making sense of street chaos:	Critical Realist Mod	*International Journal for*	Goal was to make sense of the	6; Critical-Realist Ethnography	Generative structures that led to	n/a	142	Semi-structured interviews,	homeless adults in Dubli	Study **based in Dublin.** Critical-realism

exploration of homeless people's health service utilization. International Journal for Equity in Health, 18(1), 113. doi:10.1186/s12939-019-1002-6		anethnographic exploration of homelesspeople's health service utilization	el of HSU for homeless people	*Equity in Health*	health service utilization of individuals that are homeless. **Take Home:** past experiences shaped the barriers that lead to the HSU that doesn't match up with society's expectation of HSU norms. The external		Internal and External Barriers. Personal Background that led to Psychological Barriers.			focus groups	n from drop-in center for homeless, food-hall for homeless, local ED in Dublin, and outreach service for homeless	used to understand why homeless population uses healthcare a certain way NOT predict the way they will use it. Population focused on "literal homelessnness" = rough sleeping or using hostels or temporary accomodation." This model created FROM RESEARCH; previous models that try to explain

					and internal factors that lead to this difference in HSU from stably housed people is explained in the Critical Realist Model for why HSU is differe with people that are homeless.							HSU of homeless were crafted, then tested by research. The Model is used only to explain why HSU is different from non-homeless; NOT USED TO PREDICT/ EXPLAIN HOMELESS HSU. Suggested use of the model: ID external physical, administrative, communicative, and attitudinal barriers; along with

												internalised barriers that deter from using a health service. ***There was often prioritization of needs perceived as needed for survival; "competing priorities" **Generalizability:** HSU of homeless interviewed in Dublin "RESEMBLED THAT OF HSU OF HOMELESS PEOPLE INTERNA

												TIONALLY."
White, B. M., Jones, W. J., Moran, W. P., & Simpson, K. N. (2016). Effect of the economic recession on primary care access for the homeless. Journal of Health Care for the Poor and Underserved, 27(3), 1577-1591. doi:10.1353/hpu.2016.0104	2016	Effect of the economic recession on primary care access for the homeless	n/a	*Journal of Health Care for the Poor and Underserved*	**Purpose:** To investigate how the recession affected primary care access for homeless and non-homeless individuals via number of hospitalizations for ambulatory care conditions. **Take Home:** Homele	4; Retrospective case-control	**homeless, non-homeless**	n/a	82361 homeless, 3624396 non-homeless	Data mining using the State Inpatient Databases across 4 states (CA, CO, FL, NY)	admitted patients for an ambulatory care sensitive condition from 2006-2012, adults and seniors	***Homeless have poor primary care access with many barriers to overcome, leaving them susceptible to poorer health outcomes compared to stably housed individuals *** Findings: Recession was a barrier to primary care access for homeless people that were uninsured. INSURAN

					ss are a very vulnerable population; regardless of the economic situation, they have always suffered difficulties in accessing primary care services. Policy changes such as Medicaid expansion, to include childless adult							CE COVERAGE **CAN HELP FACILITATE** PRIMARY CARE ACCESS TO ECONOMICALLY DISADVANTAGED POPULATIONS, like the homeless. PCP is the entry-way into the healthcare system. Uninsured homeless greatly impacted by economic downturn on their access to PCP;

					homeless people that typically don't qualify, and addressing social determinant issues that cause COMPETING PRIORITIES are changes that need to be done to improve the health outcomes of homeless							**Targeted outreach = potential solution to expand healthcare coverage**

White, B. M., & Newman, S. D. (2015). Access to primary care services among the homeless: a synthesis of the literature using the equity of access to medical care framework. Journal of primary care & community health, 6(2), 77–87. https://doi.org/10.1177/2150131914556122	2015	Access to primary care services among the homeless: a synthesis of the literature using the equity of access to medical care framework	The Equity ofAccess to Medical Care Framework--assesses factors that contribute to equity in accessing healthcare; equity = health service	*Journal of primary care & community health*	Purpose: 1. ID barriers and ID facilitators to primary care for homeless 2. provide recommendations for how to improve healthcare accessibility **Synthesis**: The Equity of Access to Medical Care Framework was used to reflect	5; Systematic Review	**Policy, Health System, HSU, Satisfaction of patient**	n/a	111 studies	Lit search through Pub Med, CINAHL, and PsycINFO using: primarycare, access to care, barriers to care, equity of care, assessment of need, and homeless	n/a	**Homeless risk having conditions that can be managed by primary providers to deteriorate and result in hospital admission; LACK OF INSURANCE AND LACK OF REGULAR CARE CONTRIBUTES TO THIS OUTCOME. -Having an accessible PCP = decreases mortality and increases Health Service

			received whenever needed		the findings of this study--that there are policy, healthcare system, and provider-focused changes that need to be addressed to improve and make healthcare more equitable for the homeless					persons		Utilization for primary services-Admissions may be high for ambulatory problems r/t lack of primary services accessed. Facilitators :- healthcare facility that acts as a "one-stop shop" for homeless; BEST WAY TO IMPROVE PCP ACCESS; handful of services located in one geographic location. = BETTER

					population.							PATIENT EXPERIENCE- Policy Improvements: insurance facilitates primary care access; BUT INSURANCE DOES NOT CAUSE PRIMARY CARE ACCESSIBILITY; non-medicaid usually has more regular care than medicaid enrollees; **INSURANCE ALONG DOES NOT**

												INCREASE ACCESS TO HEALTH SERVICES; Culturally Sensitive Care: providers need to understand the unique needs of the homeless population At-Risk Subpopulations of Homeless: males, ethnic minorities (notably black and hispanics), mental illness shown to have increased

												primary care barriers. !!!Primary Care gateway for medical care
Buhumaid, R., M.D., Riley, J., M.D., Sattarian, Mehdi, MD, FACEP, Bregman, B., MD, & Blanchard, Janice,M.D., PhD. (2015). Characteristics of frequent users of the emergency department with psychiatric conditions. Journal of Health Care for the Poor and Underserved, 26(3), 941-950. doi:http://dx.doi.org/10.1353/hpu.2015.0079	2015	Characteristics of frequent users of the emergency department with psychiatric conditions	n/a	*Journal of Health Care for the Poor and Underserved*	Purpose: To evaluate the characteristics of people that frequently use the ED who also have MH conditions. **Synthesis**: Look out for Medicaid	4; Retrospective Cohort Study	**Gender, Age, Comorbidities, Race, EtOH hx, Substance Abuse Hx, Homelessness**	n/a	569	retrospective data mining	Urban, Emergency Department, patient with MH and frequent ED use.	**22.1% of people that have >4 ED visits ("Freqent user group"): >40yo, have AT LEAST 1 MEDICAL CONDITION, HAVE MEDICAID, BLACK, HOMELESS -Typically their final ED diagnosis

					patients with MH conditions + a chronic medical condition --this population may not be getting proper medical management from their PCP since their ED visit usually ends up in admission. MEDICAID DOES NOT EQUA							is a Medical problem and NOT r/t to their known MH history (>70%) -Have higher rates of visits turning into an admission; SICK due to lack of access to outpatient primary care access Critique: Inclusion criteria of needing at least 1 psychiatric problem as the final diagnosis EXCLUDES ALL

					TE TO ACCESS TO HEALTHCARE; There are still barriers to achieve primary care.							WITHOUT MENTAL HEALTH ISSUES.
Chelvakumar, G., Ford, N., Kapa, H. M., Lange, H. L. H., McRee, A., & Bonny, A. E. (2017). Healthcare barriers and utilization among adolescents and young adults accessing services for homeless and runaway youth. Journal of Community Health, 42(3), 437-443. doi:10.1007/s10900-016-0274-7	2017	Healthcare Barriers and Utilization Among Adolescents and Young Adults Accessing Services for Homeless and Runaw	n/a	*Journal of Community Health*	Purpose: explore barriers to healthcare access for homeless youth and young adultsTake Home: Since the berriers affected	6; Qualitative survey	**Barriers: "don't have a ride," "no insurance," "costs too much"; External/Logistic barriers; insurance barrier; fear-**	n/a	180	survey	(average age was 19yo) adolescents and young adults accessing services at 3 community centers for homel	**Most common barriers: no ride, no insurance, cost too much; fear based barrier is minor. Having health insurance predictor of having regular provider.

		ay Youth			the youth differently depending on the health outcome they're focused on (i.e. those that see their doctor sporadically vs. regularly). Further studies need to be done exploring how each barrier affects different		**based barrier**				ess and runaway youth in Ohio	

					outcomes.							
White, B., Ellis, C., Jones, W., Moran, W., & Simpson, K. (2018). The effect of the global financial crisis on preventable hospitalizations among the homeless in New York State. Journal of Health Services Research & Policy, 23(2), 80–86. https://doi.org/10.1177/1355819617742180	2018	The effect of the global financial crisis on preventable hospitalizations among the homeless in New York State	n/a	*Journal of Health Services Research & Policy*	Purpose: To examine how the financial crisis of 2007-2008 affect the primary care access (measured via the amount of ambulatory care services admissions) of homeless people compared to non-	4; Retrospective cohort study	**homeless, non-homeless, ambulatory care sensitive conditions**	n/a	172,594; 10551 homeless, 162043 non-homeeless	data mining NY State Inpatient Database from 2006-2012	New York State Inpatient Database from 2006 to 2012	Findings: homeless had HIGHER preventable hospitalizations than nonhomeless adults. Lack of insurance for homeless associated with a high hospitalization rate for ambulatory care sensitive conditions. Still remained high after the financial crisis compared to

					homeless.							nonhomeless!!!!
Chhabra, M., Spector, E., Demuynck, S., Wiest, D., Buckley, L., & Shea, J. A. (2020). Assessing the relationship between housing and health among medically complex, chronically homeless individuals experiencing frequent hospital use in the united states. Health & Social Care in the Community, 28(1), 91-99. doi:10.1111/hsc.12843	2019	Assessing the relationship between housing and health among medically complex, chronically homeless individuals experiencing frequent hospital use in the United States	n/a	*Health & Social Care in the Community*	Purpose: "to explore how housing stability affected chronic disease management and social and community relationships among people with complex health and social needs and patterns of high hospital utilizati	6; Qualitative individual interviews	**Housing stability, hospital utilization**	n/a	26	individual, semi-structured interviews between March-July 2017	north eastern US, mid-size city	Findings: "Study participants reported less frequent use of emergency services and more regular interaction with primary care providers. Additionally, case managers' role in connecting clients to behavioural health services removed barriers to care that clients had previously faced.

					on that are part of the Housing First Program"Take Home: Housing is incredibly important to facilitate better health, and case managers are important assets to try and assist in the factors that affect health and							Housing also facilitated reconnection with family and friends whose relationships with participants had become strained or distant"

					housing .							

Appendix C

DNP Project Data Collection Tool

Thank you for your willingness to take this survey. I am interested in learning what prevents people from successfully enrolling in health insurance. Your participation will help me to better understand what kind of information needs to be provided to people to help address some of the common roadblocks in that process.

Instructions:
Please answer the questions to the best of your ability by choosing one of the answer choices given, or by filling in the blank.

1. What is your age today?

○ _____

2. Do you have children under 21 years old living with you?

○ Yes
○ No

3. Do you currently have health insurance?

○ Yes
○ No

4. Have you lost health insurance in the last year?

○ Yes
○ No

5. Including you, how many people live with you?

○ _____

6. What is your household's current monthly income (your income plus the income of other people living with you)?

○ _____

7. Has your doctor ever diagnosed you with a physical, mental, or emotional disability?

○ Yes
○ No

8. Do you understand health insurance forms?
   - ○ Never
   - ○ Rarely
   - ○ Sometimes
   - ○ Very often
   - ○ Always

9. Where do you go to find out about getting health insurance? Check all that apply.

☐ Department of Social Services Office
☐ Doctor's Office
☐ Families Moving Forward staff
☐ None of the above
☐ Other: _____

10. What do you believe would make someone eligible for Medicaid?
_____
_____
_____

11. What documents can be used to apply for Medicaid/health insurance? Check all that apply.

☐ Certified birth certificate
☐ Social Security Card
☐ Driver's License
☐ Paycheck stubs

12. What can make you eligible for Medicaid insurance? Check all that apply.

☐ Having a diagnosed disability
☐ Age 65 or older
☐ Low-income individuals and families
☐ Being Pregnant

13. These documents are all needed to apply for Medicaid or other health insurance.
Check all the documents that you have.

☐ Certified birth certificate
☐ Social Security Cards for you and your family
☐ ANY TWO of these documents: water/gas/electric bills, driver's license, picture ID, voter card, or military papers
☐ Last month's check stubs from work, child support, pension, veteran's benefits
☐ Copies of all insurance policies
☐ List of all vehicles with their Vehicle Identification Number (VIN)
☐ Bank information (checking, savings accounts)
☐ List of any property owned

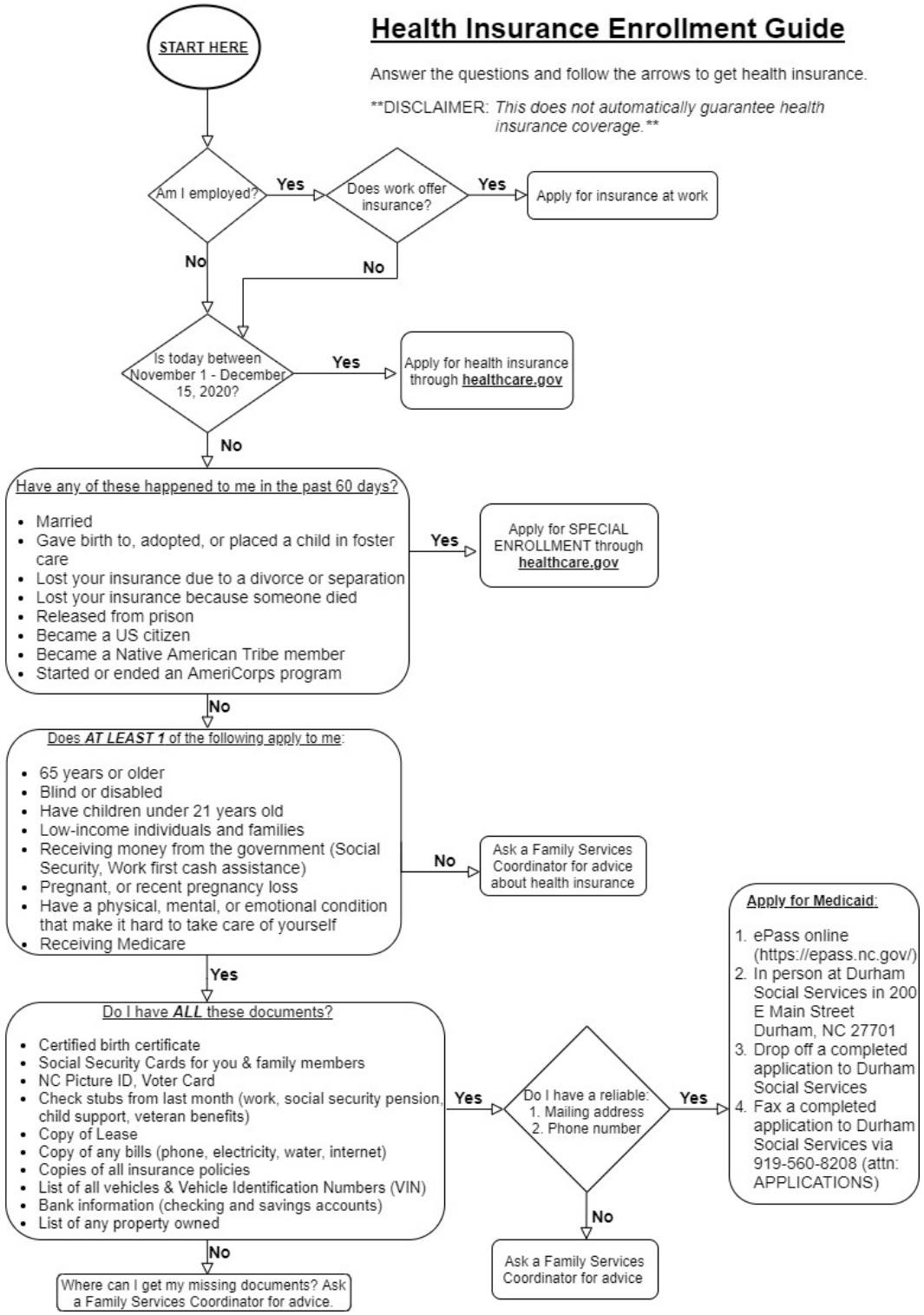
13.1 If you were planning on applying, how do you plan on getting the missing documents?
_____
_____
_____

14. Tell me about your previous experience in applying for health insurance.
_____
_____
_____

15. What information would be helpful in the insurance enrollment guide?
_____
_____

Appendix D

Health Insurance Enrollment Flowchart



Appendix E

PDSA Worksheets Cycles 1-6

Before filling out the template, first save the file on your computer. Then open and use that version of the tool. Otherwise, your changes will not be saved.

Template: PDSA Worksheet

Objective:

To begin the implementation of the insurance enrollment flowsheet with the guests of Families Moving Forward.

1. Plan: Plan the test, including a plan for collecting data.

Questions and predictions:

- Will the guests be able to understand the entire flowsheet? (No, they may misinterpret a section of the flowsheet)
  What do I do if the guests can't understand the flowsheet? (See if there's a particular part that they cannot understand, and then help by clarifying any misinterpretations)
- Will the guests see the flowsheet as useful? (Yes, they'll overall see it is an important tool to have)

Who, what, where, when:

Families Moving Forward guests will receive a flowsheet and survey hardcopy from me in-person within the NEST facility in downtown Durham on the week of 8/10/20.

Plan for collecting data:

I will alot 15-20 minute time slots for guests to fill out their survey. If they have questions about anything, I'll help clarify and write down those questions to help with any improvements for future cycles. Data from the survey will be stored in a specific folder labeled for that day of data collection, and all survey data will be transferred into SPSS.

2. Do: Run the test on a small scale.

Describe what happened. What data did you collect? What observations did you make?

The actual plan to implement in-person was not able to occur due to the concerns about guest safety and the spread of COVID-19. Therefore, no data was collected during this cycle. I did end up having a productive meeting with Tasha and Ann through zoom, which helped to lay out the next steps in this project. Tasha and Ann seems more comfortable if the project is done electronically.

3. Study: Analyze the results and compare them to your predictions.

Summarize and reflect on what you learned:

I learned that the Survey has to be implemented electronically. At this point I need to create a qualtrics survey and find out how this will be distributed, find out how to distribute an electronic copy of the flowsheet, and how to schedule times to be with guests while they fill out the survey. Tasha reports that the majority, if not all, guests have email access which is ideal moving forward.

4. Act: Based on what you learned from the test, make a plan for your next step.

Determine what modifications you should make — adapt, adopt, or abandon:

A qualtrics version of the survey will be emailed to Tasha so that she can distribute this to the guests. In addition, a copy of the flowsheet will be included in that email. I will also ask Tasha if print outs of the flowsheet will be available for better readability. The aim is to implement by 9/1/20, and have about 15-20 minute meeting times for guests setup via Tasha based on my availability.

Before filling out the template, first save the file on your computer. Then open and use that version of the tool. Otherwise, your changes will not be saved.

Template: PDSA Worksheet

Objective:

To initiate the online distribution of the health insurance enrollment survey while doing a zoom meeting.

1. Plan: Plan the test, including a plan for collecting data.

Questions and predictions:

- Will there be at least 20% survey completion with the FMF guests? (Based on what Tasha has said to me, there may even be less than 20% completion rate).

- Is it beneficial to have each guest do a zoom meeting with me while they fill out the survey? (Yes, it mimics administering the survey in person and allows guests to have me as a reference if they have questions). How much time should be alotted for each Zoom call while the patient fills out the survey? (No more than 20 mins, to anticipate connection problems)

Who, what, where, when:

Families Moving Forward guests will receive an insurance enrollment flowsheet hardcopy while they take the qualtrics survey of the DNP project collection tool if they decide to sign up for for a Zoom video chat with me while doing the survey starting 9/1/20.

Plan for collecting data:

I will alot 15-20 minute time slots for guests to fill out their survey while they are on a Zoom call with me. If they have questions about anything, I'll help clarify and write down those questions to help with any improvements for future cycles. Data from the survey will be stored in a specific folder labeled for that day of data collection, and all survey data will be transferred into SPSS.

2. Do: Run the test on a small scale.

Describe what happened. What data did you collect? What observations did you make?

Delay for week of 9/1 due to lack of email communication between me and the project partner. There are still no data collected from the online survey posted, and no interest in scheduling a 10-15 minute zoom meeting. I provided the project partner via email with a flier to use during the house meeting to try and elicit interest for the survey.

3. Study: Analyze the results and compare them to your predictions.

Summarize and reflect on what you learned:

Since no interest has been elicited by the survey, asking potential participants to schedule a 10-15 minute zoom call may be difficult given their already stressful circumstances (i.e. home insecurity, being in a pandemic, online school if they have children). An option needs to be provided that allows some flexibility.

4. Act: Based on what you learned from the test, make a plan for your next step.

Determine what modifications you should make — adapt, adopt, or abandon:

I need to initiate another option of independently taking the survey without having to schedule a meeting with me for this following cycle.

Before filling out the template, first save the file on your computer. Then open and use that version of the tool. Otherwise, your changes will not be saved.

Template: PDSA Worksheet

Objective:

To elicit interest in completing the DNP Project survey by either scheduling a zoom call with me, or by completing the survey independently. (Cycle 3 9/7/20).

1. Plan: Plan the test, including a plan for collecting data.

Questions and predictions:

- Will we need to expand the participant pool to include the people that are in the Aftercare program? (I believe we need to, since the project partner said their participation rates are better than guests within the NEST)
  What approach will elicit the interest of potential project participants to complete the survey? (ensuring coverage before it lapses)
- Will more people be prone to answer the survey independently versus schedule a zoom meeting? (I believe that this is probably going to be the case in the long run).

Who, what, where, when:

Families Moving Forward guests within the NEST and in the Aftercare program will receive an insurance enrollment flowsheet hardcopy while they take the qualtrics survey of the DNP project collection tool if they decide to sign up for for a Zoom video chat with me or if they decide to take the survey independently starting 9/7/20.

Plan for collecting data:

I will alot 15-20 minute time slots for guests to fill out their survey while they are on a Zoom call with me, or independently. If they have questions about anything, I'll help clarify and write down those questions to help with any improvements for future cycles. Data from the survey will be stored in a specific folder labeled for that day of data collection, and all survey data will be transferred into SPSS.

2. Do: Run the test on a small scale.

Describe what happened. What data did you collect? What observations did you make?

The project partner said "most of our parents are transition aged youth. They have not navigated this process (homelessness while parenting.... and adulting) and that could have an impact on their lack on engagement." The aftercare coordinator said that most families prefer to communicate by text/phone rather than email. There was no response to the survey, but interest seems to be up.

3. Study: Analyze the results and compare them to your predictions.

Summarize and reflect on what you learned:

Adding the option to fill out the survey on the smartphone is an option that may be more accessible for Aftercare individuals. It is much easier to work with the subpopulations of the NEST and Aftercare guests if there is a person directly working with those people rather than trying to coordinate this with my site champion who oversees a lot of responsibilities already.

4. Act: Based on what you learned from the test, make a plan for your next step.

Determine what modifications you should make — adapt, adopt, or abandon:

Instead of scheduling and arranging with the Site Champion, I'll be working directly with an Aftercare Americorps volunteer, and the NEST Vista volunteer for each respective group. NEST participants and Aftercare folks will have the option to fill out the survey via their smartphones aside from doing so independently, or meeting with me via zoom. NEST folks can also use a paper copy.

Before filling out the template, first save the file on your computer. Then open and use that version of the tool. Otherwise, your changes will not be saved.

Template: PDSA Worksheet

Objective:

To elicit interest in completing the DNP Project survey by either scheduling a zoom call with me, by completing the survey independently via the computer, their smartphone, or by paper. (Cycle 4 9/25/20).

1. Plan: Plan the test, including a plan for collecting data.

Questions and predictions:

- Will the Aftercare and NEST guests have different preferences for how they fill out their surveys? (Yes, NEST may prefer paper for convenience, and Aftercare may use either electronic means since they don't have direct contact with FMF)
  If paper copies of surveys are preferred, how will this be provided? (These may be provided by the VISTA volunteers)
- Will more people be apt to answer the survey independently versus schedule a zoom meeting? (I believe that this is probably going to be the case in the long run)

Who, what, where, when:

Families Moving Forward guests within the NEST and in the Aftercare program will receive an insurance enrollment flowsheet paper/electronic copy while they take the qualtrics survey of the DNP project collection tool if they decide to sign up for for a Zoom video chat with me or if they decide to take the survey independently starting 9/25/20.

Plan for collecting data:

I will alot 15minute time slots for guests to fill out their Qualtrics survey while they are on a Zoom call with me. If they have questions about anything, I'll help clarify and write down those questions to help with any improvements for future cycles. Survey done by paper will be stored in a folder with the date taken. All survey data will be transferred into SPSS.

2. Do: Run the test on a small scale.

Describe what happened. What data did you collect? What observations did you make?

There are 16 families in shelter (NEST) as of 9/25/20. 1 NEST person filled out a paper copy on 9/30, 4Aftercare met with me on zoom on 9/30. 3 NEST filled it out independently, and 4 Aftercare filled it out independently. 4/6 scheduled showed up to zoom. Zoom worked really well, felt like an in-person meeting where we can talk as they fill out the survey.

3. Study: Analyze the results and compare them to your predictions.

Summarize and reflect on what you learned:

The Vista volunteers have done a lot of recruiting on behalf of the project. I am not sure how often they are reaching out to families. Zoom was a great way to administer the survey in lieu of meeting in person. Some people weren't sure what to expect during the zoom call. One person (NEST), could have been 2 if I didn't show this person, did not fill out back of survey.

4. Act: Based on what you learned from the test, make a plan for your next step.

Determine what modifications you should make — adapt, adopt, or abandon:

Continue independent option of filling out the survey to maximize accessibility. May need to emphasize to NEST VISTA volunteer to tell guests there are 2 sides to survey, and make sure they're filling it out with the flowsheet. Need to ask how often and how they're talking with potential participants.

Before filling out the template, first save the file on your computer. Then open and use that version of the tool. Otherwise, your changes will not be saved.

Template: PDSA Worksheet

Objective:

To elicit interest in completing the DNP Project survey by either scheduling a zoom call with me; or by completing the survey independently via the computer, their smartphone, or by paper. (Cycle 5 10/1/20).

1. Plan: Plan the test, including a plan for collecting data.

Questions and predictions:

- Will I get at least 20% response rate with the NEST, and 20% with the Aftercare populations? (I will probably get this with the NEST due to volunteer being in house with the guests, while Aftercare volunteer only sees these guests virtually which may decrease survey response rates).
- How will the flowsheet structure change based on the feedback received from the guests? (information will need to change based on typical family makeup of FMF guests, and make it more applicable to them).

Who, what, where, when:

This project will involve guests in the NEST and the Aftercare program, who will either take the online survey or the paper version of it while referring to the Insurance Enrollment Flowsheet. This will take place via zoom meetings with me on a scheduled time, or they can fill these out independently.

Plan for collecting data:

Data will be collected from the online surveys and the paper surveys completed, and these will be transferred to SPSS.

2. Do: Run the test on a small scale.

Describe what happened. What data did you collect? What observations did you make?

Only one survey was scheduled on 10/5, and the guest was not able to attend. No additional surveys were completed regardless of the volunteers advertising the survey. Families in the NEST were under the impression that it was one survey per family, rather than per person as reported by the NEST volunteer. Aftercare guests have not expressed anymore interest.

Before filling out the template, first save the file on your computer. Then open and use that version of the tool. Otherwise, your changes will not be saved.

Template: PDSA Worksheet

Objective:

To revise the flow sheet based on feedback from the survey, and establish a manner to transition the flowsheet into the FSC workflow (Cycle 6 10/10/20).

1. Plan: Plan the test, including a plan for collecting data.

Questions and predictions:

- Which sections of the flowsheet need to be addressed based on feedback? (the document requirements, and income limits should be reflective of the type of Medicaid that the majority of guests would be applying for).

- How will the flowsheet be transitioned into the FSC workflow? (Ann will likely get this incorporated as a handout that FSCs can give to anyone interested in health insurance). Will this be able to be implemented by the time open enrollment begins on November 1? (This depends on timing of communication between me/Ann/Tasha given their busy schedules).

Who, what, where, when:

This cycle involves me, Ann, and Tasha, and involves constructing a process to include the flowsheet into the FSC work flow in FMF that works for them as soon as 11/1/20, but to start the conversations on 10/9/20 of how to do so.

Plan for collecting data:

I will continue to have the survey open online, and tell the VISTA volunteers that any guest that expresses interest in Aftercare or in the NEST is welcome to fill out the survey in person, or online.

2. Do: Run the test on a small scale.

Describe what happened. What data did you collect? What observations did you make?

The VISTA volunteers have notified me that they have contacted all the guests in Aftercare and the NEST, and no one else is interested in completing the survey. Ann is in agreement that the FSCs can incorporate the flowsheet into their workflow.
The Durham SS worker I'm in contact with helped clarify the renewal process for medicaid, which needs to happen every 12 months.

3. Study: Analyze the results and compare them to your predictions.

Summarize and reflect on what you learned:

The flowsheet was revised to reflect requirements for Medicaid for families with dependents based on survey data and feedback. Seems that interest has dwindled already about the survey regardless of reminders from volunteers. Ann does agree that the flowsheet can be incorporated with FSC workflow, how/when it's used just needs to be specified.

4. Act: Based on what you learned from the test, make a plan for your next step.

Determine what modifications you should make — adapt, adopt, or abandon:

A conversation needs to be had with Ann regarding how the flowsheet will be incorporated in the FSC workflow, when it will be used, and how this will be utilized during the Open Enrollment Period. A focused pitch for renewing medicaid may be a good message to use. Since the volunteers aren't receiving anymore interest with the survey, I believe that I cannot gather anymore data at this point.